



CENTRAL UP GAS LIMITED
(CITY GAS PROJECT IN KANPUR & BAREILLY)

**BID DOCUMENT FOR THE
PROCUREMENT OF MDPE PIPES FOR
02 YEARS ON ARC BASIS**

BID DOCUMENT NO : CUGL/C&P/TEN1920/19,209,057

OPEN DOMESTIC COMPETITIVE BIDDING

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IFB

(INVITATION FOR BID)

SECTION -I

सेन्ट्रल यू.पी. गैस लिमिटेड
(गैल (इंडिया) लिमिटेड एवं भारत पेट्रोलियम का संयुक्त उद्यम)



Central U.P. Gas Limited
(A Joint Venture of GAIL (India) Limited and BPCL)

INVITATION FOR BID (IFB)

Bid Document No. : CUGL/C&P/TEN1920/19,209,057
To,

Date :18/03/2020

Contact No. :

Kind Attn :

Dear Sir,

Central UP Gas Limited (CUGL), a Joint Venture company between GAIL & BPCL, as part of its service to provide clean fuel to Kanpur & Bareilly city is currently executing City Gas Distribution Project to supply Natural Gas to Industrial, Commercial and Domestic consumers and CNG for Vehicles.

- | | |
|----------------------------|--|
| 1.0 Project | : City Gas Distribution |
| 2.0 Name of Work | : Procurement of MDPE Pipes for Kanpur, Unnao, Bareilly & Jhansi for 02 years on ARC Basis |
| 3.0 Scope of Work | : As per Tender Document |
| 4.0 Time Schedule | : As per Tender Document |
| 5.0 Bid Validity | : 120 days from the bid due date |
| 6.0 Bid Security / EMD | : Item No. 1 : Rs. 6,31,000/-, Item No. 2 : Rs. 4,33,000/-, Item No. 3 : Rs. 2,35,900/-, Item No. 4 : Rs. 69,100/- |
| 7.0 Pre-Bid Meeting | : 26/03/2020; 11:30 Hrs. IST |
| 8.0 Bid due Date with Time | : 14/04/2020 up to 15:00 Hrs. IST |
| 9.0 Designated Place | : CENTRAL U.P. GAS LIMITED,
Regd. Off. 7th Floor, UPSIDC Complex, A-1/4, Lakhanpur,
Kanpur-208024 India |
| 10.0 Type of bid | : Two Bid System |
| 11.0 Basic of Evaluation | : Item wise |

Bidders to quote for complete items as per SOR. Please note that Owner intends to evaluate and finalize this tender on Item wise. Failure to quote for any of the items listed to rejection of bid.
CUGL has the right to award the job either in part or full.

For & on behalf of
Central U.P. Gas Limited

Sr. Manager C&P

रजिस्टर्ड ऑफिस : सातवाँ तल, यूपीएसआईडीसी कॉम्प्लेक्स, ए-1/4, लखनपुर, कानपुर - 208 024 उ.प्र. • दूरभाष : 0512-2585001, 2583462 • फैक्स : 2582453 • वेबसाइट : www.cugl.co.in

Registered Office : 7th Floor, UPSIDC Complex, A-1/4, Lakhanpur, Kanpur- 208024, U.P. • Tel.: 0512-2585001, 2583462 • Fax : 2582453 • Website : www.cugl.co.in
CIN No. : U40200UP2005PLC029538

An ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 Certified Organisation

ITB

(INSTRUCTION TO BIDDER)

SECTION -II

INSTRUCTIONS TO BIDDERS

A. GENERAL

1.0 SCOPE OF BID:

- 1.1 The Employer/ Owner/ CUGL as defined in the "General Conditions of Contract [GCC]", wishes to receive Bids as described in the Bidding Document/Tender document issued by Employer/Owner/CUGL.
- 1.2 SCOPE OF BID: The scope of work/ Services shall be as defined in the Bidding documents.
- 1.3 The successful bidder will be expected to complete the scope of Bid within the period stated in Special Conditions of Contract.
- 1.4 Throughout the Bidding Documents, the terms 'Bid', 'Tender' & 'Offer' and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2.0 ELIGIBLE BIDDERS:

- 2.1 The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt & Fraudulent practices, as defined in "Instructions to Bidders [ITB], Clause No. 39"
- 2.2 The Bidder is not put on 'Holiday' by CUGL or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. If the bidding documents were issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/ evaluation/Award and will be returned immediately to such bidders.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to CUGL by the bidder.

It shall be the sole responsibility of the bidder to inform CUGL in case the bidder is put on 'Holiday' by CUGL or banned/blacklisted by Government department/ Public Sector on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause 39 of ITB.

- 2.3 The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to CUGL by the bidder.

It shall be the sole responsibility of the bidder to inform CUGL in case the bidder is under any liquidation court receivership or similar proceedings on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause no.39 of ITB.

- 2.4 Bidder shall not be affiliated with a firm or entity:

- (i) that has provided consulting services related to the work to the Employer during the preparatory stages of the work or of the project of which the works/services forms a part of or
- (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/Consultant for the contract.

- 2.5 Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.

3.0 BIDS FROM JOINT VENTURE/CONSORTIUM

NA

4.0 ONE BID PER BIDDER

- 4.1 A Firm/Bidder shall submit only 'one [01] Bid' in the same Bidding Process. A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.

- 4.2 Alternative Bids shall not be considered.

5.0 COST OF BIDDING

- 5.1 The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Bank charges all courier charges including taxes & duties etc. incurred thereof. Further, CUGL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

6.0 SITE VISIT

- 6.1 The Bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required job. The costs of visiting the site shall be borne by the Bidder.
- 6.1 The Bidder or any of its personnel or agents shall be granted permission by the Employer to enter upon its premises and land for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Employer and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.
- 6.3 The Bidder shall not be entitled to hold any claim against CUGL for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.
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B BIDDING DOCUMENTS

7.0 CONTENT OF BIDDING DOCUMENT

- 7.1 The contents of bidding documents/Tender documents are those stated below and should be read in conjunction with any addenda/corrigendum issued in accordance with ITB clause no. 9.0
- Section –I : Invitation for bids (IFB)
 - Section –II : Instruction to Bidders (ITB)
 - Section-III : General conditions of Contract (GCC)
 - Section IV : BEC (Bid Evaluation Criteria)
 - Section-V: Forms & Format
 - Section –VI: Special conditions of contract (SCC)

➤ Section VII : Technical Specification

➤ Section-VIII: Price schedule/Schedule of Rates (SOR)

- 7.2 The bidder is expected to examine all instructions, forms, terms, specifications and drawings in the bidding documents. The Bidding Document together with all its attachment thereto, shall be considered to be read Understood and accepted by the bidder. Failure to furnish all information required by the Bid Documents or Submission of a bid not substantially responsive to the Bidding Documents in every respect will be at bidders risk and may result in the rejection of the Bid.

8.0 CLARIFICATION ON BID DOCUMENTS

- 8.1 A prospective bidder requiring any clarification of the Bidding Documents may notify OWNER in writing or by fax or e-mail at the address indicated in the Invitation for Bids. OWNER will respond in writing to any request for clarification of the Bidding documents which it receives not later than 5 days prior to the deadline for the submission of bids prescribed by OWNER. Written copies of OWNER response (including an explanation of the query but without identifying the source of the query) will be sent to all bidders to whom the bidding documents were issued. Any Clarification or information required by the bidder and not received within the stipulated time period shall be liable to be considered as no clarification/information required.
- 8.2 In case pre-bid conference is envisaged, all quotations/queries should be referred to OWNER at least 3 days before scheduled date of pre bid conference. The questions/queries received by OWNER prior to pre-bid conference will be replied in the pre-bid conference.

9.0 AMENDMENT OF BID DOCUMENTS

- 9.1 At any time prior to the deadline for submission of bids, the OWNER may, for any reason, whether on its own requirement or in response to a clarification requested by prospective bidders, modify the Bidding Documents by issuing addenda/corrigendum.
- 9.2 Any addendum thus issued shall be part of the Bidding Documents and shall be notified in writing by fax/post/email to all the bidders to whom the bidding documents were issued. Prospective bidders shall promptly acknowledge receipt of each addendum by fax/post/to the Owner/ Consultant and take the same in the account all such addendum before submitting their bids.
- 9.3 The OWNER/Consultant may, at its discretion, extend the date of submission of Bids in order to allow the bidders a reasonable time to furnish their most competitive bid taking into account the amendments issued.

C. PREPARATION OF BIDS

10.0 LANGUAGE OF BID

- 10.1 The bid prepared by the bidder, all correspondence/drawings and documents relating to the bid exchanged by the bidder with the OWNER/Consultant shall be written in English Language alone provided. Any printed literature furnished by the bidder may be written in another language so long as accompanied by an English translation duly authentication by the chamber of commerce of bidders country, in which case, for the purpose of interpretation of the bid, the English translation shall govern.
- 10.2 In the event of submission of any document/certificate by the bidder in a language other than English, the Bidder shall submit the English translation of the same duly authenticated by Chamber of Commerce of Bidder's country.

11.0 DOCUMENTS COMPRISING THE BID

- 11.1 The bid prepared by the bidder shall comprise the following:

11.1.1 ENVELOPE-I : SUPER SCRIBING TECHNO-COMMERCIAL UN-PRICED BID (PART-1)

Part-I: Techno-commercial/un-priced Bid (to be furnished in 1 original and 1 copy) and shall contain the following documents:

- a) 'Covering Letter' on Bidder's 'Letterhead' clearly specifying the enclosed contents.
- b) 'Bidder's General Information', as per 'Form F-1'.
- c) 'Bid Form', as per 'Form F-2'
- d) Copies of documents, as required in 'Form F-3'
- e) As a confirmation that the prices are quoted in requisite format complying with the requirements copy of Schedule of Rate (SOR) with prices blanked out mentioning quoted / not quoted (as applicable) written against each item.

- f) 'Letter of Authority' on the Letter Head, as per 'Form F-5'
 - g) 'No Deviation Confirmation', as per 'Form F-6'
 - h) 'Bidder's Declaration regarding Bankruptcy', in 'Form F-7'
 - i) 'Certificate for Non-Involvement of Government of India ' from Bidder, as per 'Form F-8'
 - j) 'Agreed Terms and Conditions', as per 'Form F-10'
 - k) Duly attested documents in accordance with the "BID EVALUATION CRITERIA [BEC]" establishing the qualification.
 - l) Undertaking on the Letter head, as per the Form F-12.
 - m) Power of Attorney for authorized signatory in non-judicial stamp paper/copy of Board Resolution, the authorized signatory shall be signing the bid and any consequence resulting due to such signing shall be binding on the bidder.
 - n) Any other information/details required as per Bidding Document
 - o) All forms and Formats including Annexures.
 - p) EMD /Bid Security
 - q) Tender document duly signed by authorized signatory.
- r) All the pages of the Bid must be signed by the "Authorized Signatory" of the Bidder.

11.1.2 ENVELOP-II : SUPERSCRIBING “PRICE BID – NOT TO OPEN WITH TECHNO-COMMERCIAL UN-PRICED BID”-PART-II

11.1.3 Part-II: PRICE BID

Part-II of the BID shall be submitted in Envelope –II and shall contain Price Bid only. The Prices are to be submitted strictly in the Price Schedule/Schedule of Rate (SOR) format of the Tender Document. CUGL shall not be responsible for any failure on the part of the bidder to follow the instructions given in the Note below:

Note

- i) Bidders are advised NOT to mention Rebate/Discount separately, either in the SOR format or anywhere else in the Bid. In case Bidder(s) intend to offer any Rebate/Discount, they should include the same in the item rate(s) itself under the “Price Schedule/Schedule of Rates (SOR)” and indicate the discounted unit rate(s) only.
- ii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However, no cognizance shall be taken for any conditional discount for the purpose of evaluation of the Bid.
- iii) In case, it is observed that any of the Bidder(s) has/have offered suo-moto Discount/Rebate after opening of unpriced bid but before opening of price bid, such discount/rebate(s) shall not be considered for evaluation. However, in the event of the Bidder emerging as the lowest evaluated Bidder without considering the discount/rebate(s), then such discount/rebate(s) offered by the

Bidder shall be considered for Award and the same will be conclusive and binding on the Bidder.

- iv) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from Bidder, while evaluating the un-priced part of the Bid, any of the bidders offers upward revised prices; such Bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation. In case, any of the bidders offers discount/rebate / downward revised prices, the same shall not be considered for evaluation and their bid will be evaluated as per the original price bid. However, in the event of the Bidder emerging as the lowest evaluated Bidder without considering the discount/rebate(s), then such discount/rebate(s) offered by the Bidder shall be considered for Award and the same will be conclusive and binding on the Bidder.
- v) In case any bidder does not quote for any item(s) of “Schedule of Rates” and the estimated price impact is more than 10% of the quoted price, then the bid will be rejected. If such price impact of unquoted items is 10% or less of his quoted price, then the unquoted item(s) shall be loaded highest of the price quoted by the other bidders . If such bidder happens to be lowest evaluated bidder, price of unquoted items shall be considered as included in the quoted bid price.

11.1.4 ENVELOP-III : SUPERSCRIBING “BID SECURITY” – PART-II

Part-III: Bid Security shall contain 1 original and 1 copy of Bid Security in separate sealed envelopes.

12 BID PRICES

12.1 Bidders shall indicate the following in the Price Schedule/SOR format:-

- A) Ex-works Price including packing and forwarding charges (such price to include all costs as well as duties and taxes paid or payable on components and raw materials incorporated or to be incorporated in the goods).
- B) GST (CGST & SGST/UTGST or IGST) on the finished goods including inland transportation (which will be payable on the finished goods, if this Contract is awarded.
- C) The Bidder shall indicated breakup of the quantum of imports involved for import of necessary raw materials and components giving CIF value of Import and included in bid price.

- 12.2 In case of import of raw material and components incorporated or to be incorporated in the finished goods (clause no. 12.1 (C) refers), the Bidder shall provide description of such material, quantity, rate, value, Import Duty considered etc. as per proforma provided in Price Schedule/ SOR.
- 12.3 It shall be the endeavour of the Purchase to arrange transit insurance (if applicable). For the purpose of arranging transit insurance of the goods dispatched / shipped, vendors are required to furnish the dispatch / shipping particulars to the Insurance Company giving complete details of dispatches along with Policy No. etc.
- 12.4 Prices must be filled exactly in the format for “Price Schedule/ Schedule of Rates (SOR)” enclosed as part of Tender Document. If quoted in separate typed sheets and any variation in item description, unit, quantity, any conditions of SOR etc., is noticed, the Bid is liable to be rejected.
- 12.5 The date of receipt of materials shall be considered as date of delivery. Other terms shall be interpreted as per INCOTERMS®2010 or its latest version.
- 12.6 All duties, taxes and other levies (if any) payable by the Seller under the Contract or for any other cause, except GST (CGST & SGST/UTGST or IGST) on finished product & on the incidental services, shall be included in the rates / prices and the total bid-price submitted by the Bidder. The quoted rate of GST (CGST & SGST/UTGST or IGST) on finished product & on the incidental services shall be indicated in F-10 and the bid prices. Bidders are required to quote the prices after carefully reading the provisions mentioned in tender document including SCC, GCC, Scope of work, etc.
- 12.7 Prices quoted by the Bidder, shall remain firm and fixed and valid until completion of the Contract and will not be subject to variation on any account, whatsoever.
- 12.8 The Bidder shall quote the rates in ‘figures’ & ‘words’, as per Price Schedule /SOR format provided in the Tender Document. There should not be any discrepancy between the prices indicated in figures and in words. In case of any discrepancy, the same shall be dealt as per clause no. 32 of ITB.
- 12.9 Further, Bidder shall also mention the Harmonized System Nomenclature (HSN)/ SAC (Service application code) at the designated place in Price Schedule.

13 TAXES & DUTIES

- 13.1 Within the contractual delivery period, the statutory variation in applicable GST (CGST & SGST/UTGST or IGST) on supply and on incidental services, shall be to CUGL’s account.

Beyond the contractual delivery period, in case CUGL is not entitled for input tax credit of GST (CGST & SGST/UTGST or IGST), then any increase in the rate of GST (CGST & SGST/UTGST or IGST) beyond the contractual delivery period shall be to Supplier's account whereas any decrease in the rate GST (CGST & SGST/UTGST or IGST) shall be passed on to the Purchaser.

Beyond the contractual delivery period, in case CUGL is entitled for input tax credit of GST (CGST & SGST/UTGST or IGST), then statutory variation in applicable GST (CGST & SGST/UTGST or IGST) on supply and on incidental services, shall be to CUGL' account.

The base date for the purpose of applying statutory variation shall be the Bid Due Date.

- 13.2 In case of statutory variation(s) in the taxes & duties mentioned at clause no. 13.1 above, the Supplier shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid Due Date and on the date of revision. Claim for payment of Statutory variation should be raised preferably along with the Invoice. Any claim for arrears on account of statutory variation shall be submitted to Purchaser within two (02) months from the date of issue of such 'Government Notification', otherwise such claim may not be entertained.
- 13.3 With respect to clause no. 12.1 (C) and 12.2, the statutory variation in Import Duty (except component (s) for which input tax credit is avliable) on CIF value indicated, within contractual delivery period shall be to Purchaser's account against submission of the documentary evidence. However, any increase in the rate of Import Duty beyond the contractual delivery / completion period shall be to Bidder's account. In case of wrong classification, no variation including statutory variation of Import Duty will be payable to Supplier and any penalty due to the same shall be to Supplier's account. Any decrease in the rate of Import Duty shall be passed on to the Purchaser. Statutory variation on account of Import Duty will be allowed only on component for which input tax credit is not available.
- 13.4 New Taxes & duties: Any new taxes & duties, if imposed by the State/Central Govt. of India on the finished goods after the due date of bid submission but before the Contractual Delivery/Completion Date, shall be reimbursed to the Supplier on submission of copy of notification(s) issued from State/Central Govt. Authorities along with documentary evidence for proof of payment of such taxes & duties, but only after ascertaining it's applicability with respect to the Contract.
- 13.5 Deemed Export benefits are not applicable and Bidder should furnish prices without considering the same.
- 13.6 Supplier shall ensure timely submission of correct invoice(s), as per GST rules/regulation, with all required supporting document(s) without a period specified in Contract to enable CUGL to avail input credit of GST (CGST & SGST/UTGST or

IGST). Further, returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods/Services with requisite details.

If input tax credit is not available to CUGL for any reason not attributable to CUGL, then CUGL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct/setoff /recover such GST (CGST & SGST/UTGST or IGST) together with all penalties and interest, if any, against any amounts paid or payable by CUGL to the Suppliers.

- 13.7 The supplier shall mention the particulars of CUGL on the Invoice. Besides, if any other particulars of CUGL are required to be mentioned, under GST rules/regulations on the date of dispatch, the same shall also be mentioned on the Invoice.
- 13.8 In case CBEC (Central Board of Excise and Customs)/ any equivalent government agency brings to the notice of CUGL that the Supplier has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from CUGL to the government exchequer, then, that Supplier shall be put under Holiday list of CUGL for period of six months.
- 13.9 CUGL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet.

However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable GST (CGST & SGST/UTGST or IGST) during evaluation of bid. Where CUGL is entitled for input credit of GST (CGST & SGST/UTGST or IGST), the same will be considered for evaluation of bid as per evaluation methodology of tender document.

- 13.10 In case the GST rating of vendor on the GST portal / Govt. Official website is negative / black listed, then the bids may be rejected by CUGL. Further, in case rating of bidder is negative / black listed, after award of work for supply of goods / services, then CUGL shall not be obligated or liable to pay or reimburse **GST (CGST & SGST/UTGST or IGST)** to such vendor and shall also be entitled to deduct / recover such **GST (CGST & SGST/UTGST or IGST)** along with all penalties/ interest, if any, incurred by CUGL.

13.11 Anti-profiteering clause

As per Clause 171 of GST Act, it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Service Provider may not do the above and quote their prices accordingly.

14.0 BID CURRENCY

Bidders must submit bid in Indian Rupees only.

15.0 BID VALIDITY

15.1 The bid shall remain valid for acceptance for 4 (four) months from the bid due date. Owner/Employer shall reject a bid valid for a shorter period for being non-responsive.

15.2 In exceptional circumstance, prior to expiry of the original bid validity period, the Owner/Employer may request the bidders extend the period of validity for a specified additional period. The requests and the Responses thereto shall be made in writing (by fax/ post / e-mail). A bidder may refuse the request without forfeiture of its bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of its bid security for the period of the extension and in accordance with ITB clause in all respects.

16.0 EARNEST MONEY

16.1 Bids must be accompanied with '**Earnest Money / Bid Security**' in the form of '**Demand Draft**' [in favor of Central UP Gas Limited, payable at Kanpur] or '**Banker's Cheque**' or '**Bank Guarantee**' **as per the format given in Form -4 of the bidding documents**. Bidders shall ensure that 'Bid Security', having a validity of at least 'two [02] months' beyond the validity of the bid, must accompany the Bid in the format(s) made available in the Bidding Document. Bid not accompanied with 'Bid Security', or 'Bid Security' not in requisite form shall be liable for rejection. The Bid Security shall be submitted in Indian Rupees only.

In case Bidders registered with NSIC or District Industries Center (DIC) as small/Micro Category Enterprises are exempted from submission of EMD. The above exemption is not extended to the traders/dealers/Distributors/stockiest /wholesalers.

The documentary evidence/certificate in support of being registered with NSIC/DIC submitted by the bidder shall be duly certified by the statutory auditor of the bidder or a practicing Chartered Accountant (not being an employee or a director or not having any interest in the bidder's company/firm). The certificate should not older than 3 months from the bid due date and should indicate the Name of bidder, NSIC/DIC registration Number, Category of Enterprises, CA firm name, CA name and CA membership Number who is issuing the certificate.

16.2 The 'Bid Security' is required to protect CUGL against the risk of Bidder's conduct, which would warrant the 'Bid Security's' forfeiture, pursuant to provision of ITB.

- 16.3 CUGL shall not be liable to pay any Bank charges, commission or interest etc. on the amount of 'Bid Security'. In case 'Bid Security' is in the form of a 'Bank Guarantee', the same shall be from any Indian scheduled Bank or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the 'Bank Guarantee' itself or separately on its letterhead. 'Earnest Money / Bid Security' shall be valid for 'two [02] months' beyond the 'Bid Validity Period'
- 16.4 Any Bid not secured in accordance with "ITB Clause 16.1 & 16.3" may be rejected by CUGL as non-responsive.
- 16.5 Unsuccessful Bidder's 'Earnest Money / Bid Security' will be discharged/ returned as promptly as possible, but not later than 'thirty [30] days' after finalization of tender .
- 16.6 The successful Bidder's 'Bid Security' will be discharged upon the Bidder's acknowledging the 'Award' and signing the 'Agreement' and furnishing the 'Contract Performance Security / Security Deposit' as per the provisions of tender document.
- 16.7 Notwithstanding anything contained herein, the 'Bid Security' may also be forfeited in any of the following cases:
- (a) If a Bidder withdraws his Bid during the 'Period of Bid Validity'
 - (b) If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
 - (c) If the Bidder modifies bids during the period of bid validity (after submission date).
 - (d) Violates any other condition, mentioned elsewhere in the tender document, which may lead to forfeiture of EMD.
 - (e) In the case of a successful Bidder, if the Bidder fails to:
 - (i) to acknowledge receipt the "Notification of Award" / "Fax of Intent [FOI]/ Fax of Acceptance[FOA]",
 - (ii) to furnish "Contract Performance Security / Security Deposit"
 - (iii) to accept 'arithmetical corrections' as per provision of ITB.
- 16.8 Bid Security should be in favor of Central UP Gas Limited and addressed to CUGL. In case Bid Security is in the form of 'Bank Guarantee' or 'Letter of Credit', the same must indicate the Bid Document No. and the Work for which the Bidder is quoting. This is essential to have proper correlation at a later date. The 'Bid Security' should be in the form provided in tender document.

17.0 PRE-BID MEETING

17.1 As per IFB.

18.0 FORMAT AND SIGNING OF BID

18.1 The bidder shall prepare one original of the document comprising the bid as per clause 11 of ITB marked "original" in addition, the bidder shall submit 1 copy of the bid clearly marked as "Copy". In the event of any discrepancy between the original and the copy, the original will govern.

18.2 The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies, photocopies are also acceptable) and shall be signed by the person or persons duly authorized to sign on behalf of the bidder.

18.3 The name and position held by each person signing must be typed or printed below the signature. All pages of the bid except any catalogues/literatures shall be signed and sealed by the person or persons signing the bid.

18.4 The bid shall contain no alterations, omissions or additions, unless the person or persons signing the bid initial such corrections.

19 ZERO DEVIATION AND REJECTION CRITERIA

19.1 **ZERO DEVIATION:** Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. CUGL will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note CUGL will determine the substantial responsiveness of each bid to the Bidding Documents pursuant to provision contained in clause 30 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Bidding Documents without deviations or reservations. CUGL's determination of a bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence. CUGL reserves the right to raise technical and/or commercial query(s), if required, may be raised on the bidder(s). The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the bid includes but not limited to prices, completion, scope, technical specifications, etc. Bidders are requested to not to take any deviation/exception to the terms and conditions laid down in this "Tender Documents", and submit all requisite documents as mentioned in this "Tender Documents", failing which their offer will be liable for rejection. If a bidder does not reply to the queries in the permitted time frame then its bid shall be evaluated based on the documents available in the bid.

19.2 **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summarily rejection of Bid:

- (a) BEC
- (b) Scope of work
- (c) Firm Price
- (d) Earnest Money Deposit / Bid Security (exempted for SME enterprises as clause no. 16.1)
- (e) Specifications & Scope of Work
- (f) Schedule of Rates / Price Schedule / Price Basis
- (g) Duration / Period of Contract/ Completion schedule
- (h) Period of Validity of Bid
- (i) Price Reduction Schedule
- (j) Contract Performance Bank Guarantee / Security Deposit
- (k) Guarantee / Defect Liability Period
- (l) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (m) Force Majeure& Applicable Laws
- (n) Not submitting an undertaking that the bidder is not Holiday/ Blacklisted by CUGL or any other Govt. Dept./PSUs.
- (o) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

Note:Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.

20.0 E-PAYMENTS

NA

21.0 AGENT / CONSULTANT / REPRESENTATIVE / RETAINERS / ASSOCIATES

21.0 NA

D. SUBMISSION OF BIDS

22.0 SEALING AND MARKING OF BIDS

22.1 Bid shall be submitted in the following manner in separate sealed envelopes duly super scribed as below as per clause no. 11 of ITB:

Part-I –Techno-commercial /un-priced bid

Part-II Priced Bid

Part III-Original Bid Security

22.2 Techno-Commercial Un-Priced : (Part-I) Original Bid of Techno - Commercial un-priced Bid (1 Original + 1 Copy) shall be sealed in one separate envelope super scribing “Techno-Commercial Un-Priced Bid”.

- 22.3 **Price Bid** : (Part II) Original Priced Bid (1 Original + 1 Copy) shall be sealed in separate envelope super scribing “Priced Bid” (1 Original + 1 Copy) “Not to open along with Techno –Commercial Un-Priced Bid”.
- 22.4 Bid Security: (Part III) Original and 1 copy shall be sealed in separate envelope clearly super scribing “Bid Security” as the case may be.
- 22.5 All three envelopes containing; Techno-Commercial un-priced Bids, Priced Bids and Bid security shall further be sealed in one outer envelope super scribing “ Bid Document for the Procurement of MDPE Pipes for City Gas Projects” bid document number and shall be addressed to Sr. Manager (C&P) at address mentioned below.
- 22.6 Bids must be submitted at the following Address:
- The Sr. Manager (C&P)
CUGL, 7th Floor UPSIDC Complex,
Lakhanpur, Kanpur-208024
Phone NO.0512-2582455
Email: kkgupta@cugl.co.in / sbhatia@cugl.co.in
- 22.7 Each envelope shall indicate name and address of the bidder to enable the bid to be returned unopened, if required.
- 22.8 If the outer envelope is not sealed and marked as above, the Employer/Consultant will assume no responsibility for the misplacement or premature opening of the bid.
- 23.0 DEADLINE FOR SUBMISSION OF BID**
- 23.1 The Bid must be submitted at the address as specified in clause 22.6 above not later than the time and date as specified in Section-I, IFB.
- 23.2 The Employer may, in exceptional circumstances and at its discretion,, on giving reasonable notice by fax or any written communication to all prospective bidders who have been issued the bidding document, extend the deadline for the submission of bids. In which case all rights and obligations of the Employer and bidders, previously subject to the original deadline will thereafter be subject to deadline as extended.
- 23.4 In case any bid is submitted by bidder who is on Holiday’ by CUGL or banned/blacklisted by Government department/ Public Sector on due date of submission of bid, such bid will not be opened /evaluated and such bids shall be returned to the party immediately
- 23.5 In case of the days specified in IFB happens to be a holiday in CUGL, the next working day shall be implied.

24.0 LATE BIDS

- 24.1 Any bid received by the owner after the deadline for submission of bid prescribed by the Owner pursuant to clause 23 of ITB, will be declared “Late” & Rejected and shall be returned unopened to the bidder.

25.0 MODIFICATION AND WITHDRAWAL OF BIDS

- 25.1 The bidder may modify or withdraw its bid after the bid submission, but, before the due date of submission provided that written notice of the modification, including substitution or Withdrawal of the bid, is received by the Employer prior to the deadline prescribed for submission of bids.
- 25.2 The bidder’s modification or withdrawal note shall be prepared, sealed, marked and delivered in accordance with the provisions of clause 22 of ITB with the outer envelopes additionally marked “modification” or withdrawal as appropriate. A withdrawal notice may also be sent by fax /post, but followed by signed confirmation copy, post marked not later than the deadline for submission of bids.
- 25.3 No bid shall be modified/withdrawn after the deadline for submission of bid.
- 25.4 No bid shall be allowed to be withdrawn/modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the bid form, Withdrawal/ modification of a bid during this interval shall result in the bidders forfeiture of its bid security, pursuant to clause 15 of ITB.
- 25.5 The latest bid hence submitted shall be considered for evaluation and all other bids shall be considered unconditionally withdrawn.

26.0 OWNER/EMPLOYER’S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Owner/Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of the contract without thereby incurring any liability to the affected bidder or bidder or any obligations to inform the affected bidder or bidders of the ground for Owner/Employer action.

D. BID OPENING AND EVALUATION

27.0 BID OPENING

27.1 Unpriced Bid Opening :

CUGL will open bids, in the presence of bidders’ designated representatives who choose to attend, at date, time and location stipulated in the tender document. The

bidders' representatives, who are present shall sign a bid opening register evidencing their attendance.

27.2 *Priced Bid Opening:*

CUGL will open the price bids of those bidders who meet the qualification requirement and whose bids is determined to be technically and commercially responsive. Bidders selected for opening of their price bids shall be informed about the date of price bid opening. Bidders may depute their authorized representative to attend the bid opening. The bidders' representatives, who are present shall sign a register evidencing their attendance and may be required to be present on a short notice.

- 27.3 The price bids of those bidders who were not found to be techno-commercially responsive shall be unopened and returned unopened after opening of the price bids of techno-commercially responsive bidders.

28.0 PROCESS TO BE CONFIDENTIAL

- 28.1 Information relating to the examination, clarifications, evaluation and comparison of bids, and recommendations for the award of a Contract, shall not be disclosed to bidders or any other person officially concerned with such Process.
- 28.2 Any efforts by a bidder to influence the Owner/Employer in any manner in respect of Preparation of Bidding document & further evaluation of bids will result in the rejection of that bid.

29.0 CONTACTING THE OWNER/EMPLOYER

- 29.1 From the time of the bid opening to the time of the Contract award, if any bidder wishes to contact the Owner/Employer for any matter relating to the bid, it should do so in writing. Any effort by a bidder to influence the Owner/Employer in any manner in respect of bid evaluation or award will result in the rejection of that bid.

30.0 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

- 30.1 The owner's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-
- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;
 - (b) Has been properly signed;
 - (c) Is accompanied by the required 'Earnest Money / Bid Security';

- (d) Is substantially responsive to the requirements of the Bidding Documents; and
- (e) Provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to "ITB: Clause-28.2"

30.2 A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose employer defines the foregoing terms below:-

- a) "Deviation" is departure from the requirement specified in the tender documents.
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document.

30.3 A material deviation, reservation or omission is one that,

- a) If accepted would,
 - i) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.
 - ii) Limit, in any substantial way, inconsistent with the Tender Document, the Employer's rights or the tenderer's obligations under the proposed Contract.
- b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

30.4 The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation reservation or omission.

30.5 If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the of material deviation, reservation or omission.

30.6 CUGL reserves the right to seek any clarification from the bidder, if required on the submitted document for evaluating their bid, the same shall be asked.

31.0 PRICE BID OPENING

The Owner/Employer will open priced bids of all techno-commercially acceptable bidders.

32.0 ARITHMETIC CORRECTIONS & CORRECTION OF ERRORS

32.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- (i) When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the contractor (by multiplying the quantity and rate) shall be taken as correct.
- (ii) When the rate quoted by the contractor in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount corrected.
- (iii) When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked out, for comparison purposes

32.2 The amount stated in the bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security shall be forfeited.

33.0 CONVERSION TO SINGLE CURRENCY

All bids to submitted in INR.

34.0 EVALUATION AND COMPARISON OF BIDS

34.1 The evaluation & comparisons of the bids will be carried out for previously determined as substantially responsive pursuant to ITB Cl. No.28.

34.2 The evaluation & Comparison of all the responsive bids for supplies/works/services to be arrived at the lowest evaluated offer as Under (i) the evaluated price of bidders shall include the following:

- I. Total price quoted by the bidder (including Taxes & duties).
- II. Technical loading if any as per Technical specification.

34.3 In case more than one bidder is tied up at one position based on evaluated price, then lowest cost bidder shall be shortlisted using following tie breaker criteria in the order of sequence (i.e. criteria no. 2 will be applied only in case there is still a tie after criteria no.1):

Criteria No. 1 - The bidders who have got the higher turnover in the Financial Year.

Criteria No. 2- The bidders who have got the higher working capital (without taking into consideration of letter of credit submitted from bank) in the last Financial Year.

- 34.4 In case it is observed that any bidder has not quoted for any item in the Schedule of Rates (such unquoted item not being in large numbers), the quoted price for the purpose of evaluation shall be considered as the maximum rate quoted by the remaining bidders for such items. If after evaluation, such bidder is found to be the lowest evaluated bidder, the rates for the missing item shall be considered as included in quoted bid price. If the estimated price impact of the unquoted items is more than 10% of the bidder's quoted price, the above provision shall not be applicable and such bid shall be rejected

34.0 POST QUALIFICATION

35.1 In the absence of prequalification, the Owner/Employer will determine to its satisfaction whether the bidder selected as having submitted the lowest evaluated, responsive bid is qualified to satisfactorily perform the contract.

35.2 The determination will take into account the bidders financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the bidders qualifications submitted by the Bidder, pursuant to ITB Clause-10, as well as such other information as the Owner/Employer deems necessary and appropriate.

An affirmative determination will be a prerequisite for award of the contract to the bidder. A Negative determination will result in rejection of the bidders bid.

F - AWARD OF CONTRACT

36.0 AWARD

36.1 The Owner/Employer will award the contract to the successful bidder (s) whose bid has been determined to be Substantially responsive and/or have been determined as a lowest on least cost to Owner/Employer and is determined to be qualified to satisfactorily perform the Contract.

37.0 NOTIFICATION OF AWARD/FAX OF ACCEPTANCE

37.1 Prior to the expiration of period of bid validity, Owner/Employer (CUGL) will notify the successful bidder in writing by Post/Fax/E-mail to be confirmed in writing, that his bid has been accepted. The notification of award/Fax of Intent will constitute the formation of the Contract.

37.2 The Completion period shall commence from the date of notification of award/Fax of Acceptance (FOA).

37.3 The notification of award will constitute the formation of a Contract.

37.4 Upon the successful bidder's/ Contractor's CPBG/SD shall promptly discharge his EMD.

38.0 SIGNING OF AGREEMENT

38.1 After the successful bidder has been notified for acceptance of his bid, the bidder is required to execute the Contract Agreement within 21 days of receipt of Fax of Acceptance in the form provided in the Bidding Documents. The Contract Agreement is to be executed on the non-judicial paper of appropriate value (the cost of stamp paper shall be borne by the Contractor/Service Provider).

38.2 In the event of failure on the part of the successful bidder to sign the AGREEMENT within the above stipulated period, the Bid Security shall be forfeited and the acceptance of the award shall be considered as cancelled.

39.0 PERFORMANCE GUARANTEE

39.1 Pursuant to clause no. 04 of GCC- works, bidder will provide performance Guarantee of appropriate value within 21 days of receipt of award from the Owner/Employer. The Performance Guarantee shall be in form of Bank Guarantee and shall be in the currency of the Contract.

39.2 Failure of the successful bidder to comply with the requirement of this clause shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security and any such remedy the Employer may take under the Contract pursuant to Clause as per tender and the Owner/Employer may resort to awarding the Contract to the next ranked bidder.

40.0 Repeat Order

40.1 As per GCC

41.0 CORRUPT AND FRAUDULENT PRACTICES

41.1 The Owner/Employer requires that Bidders/contractors observe the highest standard of ethics during the execution of Contract. In pursuance of this policy, the Employer defines, for the purposes of this provision, the terms set forth below as follows:

a) "Corrupt Practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of public official in contract execution, and

b)“Fraudulent Practice” means a misrepresentation of facts in order to secure the contract or influence the execution of a Contract to the detriment of the Employer, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition; The Employer will reject a proposal for award if it determines that the bidder recommended for award has engaged corrupt or fraudulent practices in competing for the Contract in question.

41.2 The Owner/Employer will declare a firm ineligible for a period pursuant to clause as per tender.

42.0 INCOME TAX & CORPORATE TAX

42.1 Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act prevailing from time to time.

42.2 Corporate Tax liability, if any, shall be to the contractor’s account.

43.0 WAIVER OR TRANSFER OF THE AGREEMENT

43.1 The successful bidder shall not waive the Agreement or transfer it to third parties, whether in part or in whole, nor waive any interest that is included in the Agreement without the prior written permission of the Owner/Employer.

44.0 EVALUATION OF PERFORMANCE

Performance of the contract awarded shall be evaluated as per vendors evaluation policy of CUGL which is available on CUGL website

GCC

(GENERAL CONDITIONS OF CONTRACT)

SECTION-III

General conditions of Contract

Section-1 Definitions

1.0 Definitions

In this document, General Conditions of Contract (GCC-Goods), the following terms shall have the following respective meanings:

- 1.0 Bidder: Designates the individual or legal entity which has made a proposal, a tender or a bid with the aim of concluding a contract with the purchaser.
- 1.1 **CONSULTANT:** - NA
- 1.2 **CONTRACT** shall mean purchase order/contract and all attached exhibits and documents referred to therein and all terms and conditions thereof together with any subsequent modifications thereto.
- 1.3 **CONTRACT PRICE** shall mean the price payable to the seller under the contract for the full any proper performance of his contractual obligations.
- 1.4 **COMPLETION DATE** shall mean the date on which the goods are successfully commissioned by the supplier and handed over to OWNER.
- 1.5 **COMMERCIAL OPERATION** shall mean the condition of the operation in which the complete equipment covered under the contract is officially declared by the OWNER to be available for continuous operation at different loads up to and including rated capacity.
- 1.6 **DELIVERY** terms shall be interpreted as per INCO TERMS 2000 in case of contract with a foreign bidder and as the date of LR/GR in the case of a contract with an Indian bidder.
- 1.7 **DRAWINGS** shall mean and include Engineering drawings, sketches showing plans, sections and elevations in relation to the contract together with modifications and/or revisions thereto.
- 1.8 **ENGINEER** or Engineer-in-charge of the Project SITE shall mean the person designated from time to time by PURCHASER AT SITE AND SHALL INCLUDE those who are expressly authorized by him to act for and on his behalf for operation of this CONTRACT.

- 1.9** FINAL ACCEPTANCE shall mean the Purchaser's written acceptance of the work performed under the contract after successful completion of performance and guarantee test.
- 1.10** GOODS shall mean articles, materials, equipment, design and drawings, data and other property to be supplied by seller to complete the contract.
- 1.11** INSPECTOR shall mean any person or outside Agency nominated by OWNER directly or through CONSULTANT to inspect equipment, stage-wise as well as final, before dispatch, at SUPPLIER'S works and on receipt at SITE as per terms of the CONTRACT.
- 1.12** INITIAL OPERATION shall mean the first integral operation of the complete equipment covered under the Contract with sub-systems and supporting equipment in service of available for service.
- 1.13** OWNER shall mean Central UP Gas Limited (CUGL), having its registered office at 7th Floor, UPSIDC Complex, A-1/4, Lakhanpur, Kanpur -208024, UP, India. The term OWNER includes successors, assigns of CUGL
- 1.14** PERFORMANCE AND GUARANTEE TESTS shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency and operating characteristics as specified in the CONTRACT documents.
Project DESIGNATES THE AGGREGATE OF THE Goods and/or Services to be provided by one or more Contractors.

Quantities – Bills of quantities

Bills of quantities

Designate the quantity calculations to be taken into account when these calculations are made from detailed or construction drawings, or from work actually performed, and presented according to a jointly agreed breakdown of the Goods and/or Services.

- 1.15** SUPPLIER shall mean the person, firm or company with whom PURCHASE ORDER /CONTRACT is placed/entered into by SUPPLIER for supply of equipment, materials and services. The term Seller includes its successor and assigns.
- 1.16** SERCIVE shall mean erection, installation, and testing commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the Contract.

- 1.17** SITE designates the land and/or any other premises on, under, in or across which the goods and/or Services have to be supplied, erected, assembled, adjusted, arranged and/or commissioned.
- 1.18** SPECIFICATIONS shall mean and include schedules, details, description, statement of technical data, performance characteristics, standards (Indian as well as International) as applicable and specified in the Contract.
- 1.19** SUB-CONTRACTOR shall mean order placed by the Supplier, for any portion of the contracted work, after necessary consent and approval of OWNER.
- 1.20** SUB-CONTRACTOR shall mean the person named in the CONTRACT for any part of the work or any person to whom any part of the CONTRACT has been sub-let by the SUPPLIER with the consent in writing of the OWNER and will include the legal representatives, successors, and permitted assigns of such person.
- 1.21** START-UP shall mean the time period required to bring the equipments covered under the Contract from an inactive condition, when construction is essentially complete to the state of readiness for trial operation. The start-up period shall include preliminary inspection and check out of equipment and supporting sub-systems, initial operation of the complete equipments covered under the Contract obtain necessary trial operation date, perform calibration and corrective action, shutdown inspection adjustment prior to the trial operation period.
- 1.22** TESTS shall mean such process or processes to be carried out by the Seller as are prescribed in the Contract or considered necessary by OWNER or his representative in order to ascertain quality, workmanship, performance and efficiency of equipment or part thereof.
- 1.23** TESTS ON COMPLETION shall mean such tests as prescribed in the Contract to be performed by the Supplier before the Works are taken

- 2.1 The Supplier shall be deemed to have carefully examined all contract documents to his entire satisfaction. Any lack of information shall not in any way relieve the Supplier of his responsibility to fulfill his obligation under the Contract.

- 3.1 These General Condition of Contract (GCC-Goods) shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

4.0 Country of Origin 4.1 For purposes of this Clause “origin” means the place where the **Origin** Goods were mined, grown or produced, or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

5.0 Scope of Contract 5.1 Scope of the CONTRACT shall be as defined in the PURCHASE ORDER/CONTRACT specifications, drawings and Annexure thereto.

5.2 Completeness of the EQUIPMENT shall be the responsibility of him SUPPLIER. Any equipment, fittings and accessories which may not be specifically mentioned in the specifications or drawings, but which are usual or necessary for the satisfactory functioning of the equipment (successful operation and functioning of the equipment being SUPPLIER’s responsibility) shall be provided by SUPPLIER without any extra cost.

5.3 The SUPPLIER shall follow the best modern practices in the manufacture of high grade EQUIPMENT notwithstanding any omission in the specifications. The true intent and meaning of these documents is that SUPPLIER shall in all respects, design, engineer, manufacture and supply the equipment in a thorough workmanlike manner and supply the same in prescribed time to the entire satisfaction of OWNER.

5.4 The SUPPLIER shall furnish twelve (12) copies in English language of Technical documents, final drawings, preservation instructions, operation and maintenance manuals, test certificates, spare parts catalogues for all equipments to the OWNER.

5.5 The documents once submitted by the SUPPLIER shall be firm and final and not subject to subsequent changes. The SUPPLIER shall be responsible for any loss to the OWNER consequent to furnishing of incorrect date/drawings.

5.6 All dimensions and weight should be in metric system

5.7 All equipment to be supplied and work to be carried out under the CONTRACT shall conform to and comply with the provisions of relevant regulations/Acts (State Government or Central Govt.) as may be applicable to the type of equipment/work carried out and necessary certificates shall be furnished.

- 5.8** The seller shall provide cross sectional drawings, wherever applicable, to identify the spare part numbers and their location. The size of bearings, their make and number shall be furnished.
- 5.9** Specifications, design and drawings issued to the seller along with RFQ and CONTRACT are not sold or given but loaned. These remain property of OWNER OR ITS ASSIGNS AND ARE SUBJECT TO RECALL BY OWNER. The supplier and his employees shall not make use of the drawings, specifications and technical information for any purpose at any time except for manufacture against the CONTRACT and shall not disclose the same to any person, firm or corporate body, without written permission of OWNER. All such details shall be kept confidential.
- 5.10** SUPPLIER shall pack, protect, mark and arrange for dispatch of EQUIPMENT as per instructions given in the CONTRACT.

6.0 Standards

- 6.1** The goods supplied under the CONTRACT shall conform to the standards mentioned in the Technical Specifications, or such other standards which ensure equal or higher quality, and when no applicable standard is mentioned, to the authoritative standard appropriate to the GOODS country of origin and such standards shall be the latest issued by the concerned institution.

7.0 Instructions, Direction & Correspondence

- 7.1** The materials described in the CONTRACT are to be supplied according to the standards, data sheets, tables, specifications and drawings attached thereto and/or enclosed with the CONTRACT, itself and according to all conditions, both general and specific enclosed with the contract, unless any or all of them have been modified or cancelled in writing as a whole or in part.
- a.** All instructions and orders to SUPPLIER shall, excepting what is herein provided, be given by OWNER.
- b.** All the work shall be carried out under the direction of and to the satisfaction of purchaser.
- c.** All communications including technical/commercial clarifications and / or comments shall be addressed to CUGL in quintuplicate and shall always bear reference to the CONTRACT.

- d. Invoices for payment against CONTRACT shall be addressed to OWNER.
- e. The CONTRACT number shall be shown on all invoices, communications, packing lists, containers and bills of lading, etc.

8.0 Contract Obligation 8.1

If after award of the contract, the Supplier does not acknowledge the receipt of award or fails to furnish the performance guarantee within the prescribed time limit, the OWNER reserves the right to cancel the contract and apply all remedies available to him under the terms and conditions of this contract

- 8.2 Once a contract is confirmed and signed, the terms and conditions contained therein shall take precedence over the Supplier's bid and all previous correspondence.

9.0 Modification in

9.1 All modifications leading to changes in the contract with respect to Contract technical and / or commercial aspects including terms of delivery shall be considered valid only when accepted in writing by OWNER BY ISSUING AMENDMENT TO THE contract. Issuance of acceptance or otherwise in such cases shall not be any ground for extension of agreed delivery date and also shall not affect the performance of contract in any manner except to the extent mutually agreed through a modification of contract.

- 9.2 OWNER shall not be bound by any printed conditions or provisions in the Supplier's Bid Forms OR ACKNOWLEDGEMENT OF contract, invoices, packing list and other documents which purport to impose any conditions at variance with or supplemental to contract.

10. Use of Contract document & Information 10.1

The supplier shall not, without the owner's prior written consent, disclose the CONTRACT or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the OWNER in connection therewith, to any person other than a person employed by the SUPPLIER in the performance of the CONTRACT. Disclosure to nay such employed person shall be made in confidence and shall extend only as far as may be necessary for purpose of such performance.

- 10.2 The SUPPLIER shall not, without the OWNER's prior written consent, make use of any document or information enumerated in Article 10.1 except for purpose of performing the CONTRACT.

11.0 Patent Rights Liability & Regulations 11.1

SUPPLIER hereby warrants that the use or sale of the materials delivered hereunder will not infringe claims of any patent covering such material Compliance and SUPPLIER agrees to be responsible for and to defend at his sole expense. all suits and proceeding against OWNER based on any such alleged

patent infringement and to pay⁶ all costs , expenses and damages which OWNER and/ or Consultants may have to pay or incur by reason of any such suit or proceedings.

- 11.2 The SUPPLIER shall indemnify the OWNER against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the GOODS or any part thereof in the OWNER's country.
- 11.3 SUPPLIER shall be responsible for compliance with all requirements under the laws and shall protect and indemnify completely the OWNER from any claims/penalties arising out of any infringements.
- 11.4 SUPPLIER shall be responsible for compliance with all requirements under the laws and shall protect and indemnify completely the OWNER from any claims/penalties arising out of any infringements.

12. Performance Guarantee 12.1 Within 21 days after the Seller's receipt of notification of award of the CONTRACT, the **SUPPLIER** shall furnish performance guarantee in the form of Bank Guarantee/Demand Draft/ Banker cheque to the OWNER, in the bidding documents, for and amount equivalent to 3% of the total order value (exclusive of GST) of the CONTRACT & 7% of individual delivery orders.

- 12.2 The proceeds of performance guarantee shall be appropriated by the OWNER as compensation for any loss resulting from the **Supplier's** failure to complete his obligations under the CONTRACT without prejudice to any of the rights or remedies the OWNER may be entitled to as per terms and conditions ;of CONTRACT. The proceeds of this performance guarantee shall also govern the successful performance of goods and services during the entire period of contractual warrantee/Guarantee.
- 12.3 The performance guarantee shall be denominated in the currency of the CONTRACT.
- 12.4 The Performance Guarantee shall be valid for the duration of 90 days beyond the expiry of Warrantee/Guarantee period. OWNER will discharge the Bank Guarantee not later than 6 months from the date of Expiration of the Supplier's entire obligations, including any warrantee obligations, under the CONTRACT.

13.0 Inspection, and/Testing &Expediting 13.1 The OWNER or its representative shall have the right to inspect or to test the GOODS to confirm their conformity to the contract specifications. The special conditions of contract and /or the Technical Specifications shall specify what inspections and tests the OWNER requires and where they are to be conducted. The OWNER shall notify the SUPPLIER in writing the identity of any representative(s) retained for these purposes.

- 13.2 The inspection and tests may be conducted on the premises of the SUPPLIER or his sub-contractor(s), at point of DELIVERY and/ or at the GOODS final destination, When conducted on the premises of the SUPPLIER or his sub-contractor(s), all reasonable facilities and assistance including access to the drawings and

production data shall be furnished to the inspectors at no charge to the OWNER.

- 13.3** Should any inspected or tested GOODS fail to conform to the specifications, the OWNER may reject them and the SUPPLIER shall either replace the rejected GOODS or make all alterations necessary to meet specifications requirements, free of cost to the OWNER.
- 13.4** The Owner's right to inspect, test and where necessary reject the GOODS after the GOODS arrival in the Owner's country shall in no way be limited or waived by reason of the GOODS having previously been inspected, tested and passed by the OWNER, or their representative prior to the GOODS shipment from the country of origin.
- 13.5** The INSPECTOR shall follow the progress of the manufacture of the GOODS under the CONTRACT to ensure that the requirements outlined in the CONTRACT are not being deviated with respect to schedule and quality.
- 13.6** Supplier shall allow to visit, during working hours, the workshop relevant for execution of the CONTRACT during the entire period of CONTRACT during the entire period of CONTRACT validity.
- 13.7** In order to enable OWNER'S representatives to obtain entry visas in time, SUPPLIER shall notify OWNER two months before assembly, testing and packing of main EQUIPMENT. If requested, seller shall assist OWNER representatives in getting visas in the shortest possible time (applicable only in case of foreign order).
- 13.8** SUPPLIER shall place at the disposal of the INSPECTOR free of charge, all tools, instruments, and other apparatus necessary for the the inspection and/ or testing of the goods. The inspector is entitled to prohibit the use and Dispatch of goods and/or materials, which have failed to comply with the characteristics required for the goods during tests and inspections.
- 13.9** SUPPLIER shall advise in writing of any delay in the inspection program at the earliest, describing in detail the reasons for delay and the proposed corrective action,
- 13.10** ALL TESTS and trials in general, including those to be carried out for materials not manufactured by SUPPLIER shall be witnessed by the inspector. Therefore, seller shall confirm to purchaser by fax or e-mail about the exact date of inspection with at least 30 days notice. SUPPLIER shall specify the goods and quantities ready for testing and indicate whether a preliminary or final test is to be carried out.

13.11 If on receipt of this notice, owner should waive the right to witness the test; timely information will be given accordingly.

13.12 Any and all expenses incurred in connection with tests, preparation of reports and analysis made by qualified laboratories, necessary technical documents, testing documents and drawings shall be at supplier's cost. The technical documents shall include the reference and numbers of the standards used in the construction and, wherever deemed practical by the inspector, copy of such standards.

13.13 Nothing in Argicl-13 shall in any way release the seller from any warrantee or other obligations under this contract.

13.14 Arrangement for all inspections required by Indian statutory Authorities and as specified in technical specifications shall be made by supplier.

13.15 Inspection & Rejection of Materials by consignees

When materials are rejected by the consignee, the supplier shall be intimated with the details of such rejected materials, as well as the reasons for their rejection, also giving location where such materials are lying at eh risk and cost of the contractor/supplier. The supplier will be called upon either to remove the materials or to give instructions as to their disposal within 14 days and in the case of dangerous, infected and perishable materials within 48 hours, failing which the consignee will either return the materials to the contractor freight to pay or otherwise dispose them off at the contractors risk and cost. The owner shall also be entitled to recover handling and storage charges for the period, during which the rejected

Materials are not removed @5% of the value of materials for each month or part of a month till the rejected materials are finally disposed off.

14.0 Time Schedule & Progress Reporting

14.1 Time Schedule Network/Bar Chart

14.1.1 Together with the contract confirmation, supplier shall submit to his time schedule regarding the documentation, manufacture, testing, owner supply, erection and commissioning of the GOODS

14.1.2 The time schedule will b e in the form of a network or a bar chart clearly indicating all main or key events regarding documentation, supply of raw materials, manufacturing, testing, delivery, erection and commissioning.

14.1.3 The original issue and subsequent revisions of supplier's time schedule shall be sent to owner.

14.1.4 The time schedule network/bar chart shall be updated at least every second month.

14.2 Progress Trend Chart / Monthly Report

- 14.2.1 SUPPLIER shall report monthly to OWNER, on the progress of the execution of contract and achievement of targets set out in time bar chart.
- 14.2.2 The progress will be expressed in percentages as shown in the progress of the execution of CONTRACT and achievement of targets set out in time bar chart.
- 14.2.3 The first issue of the Progress Trend Chart will be forwarded together with the time bar chart along with contract confirmation.
- 14.3.1 OWNER's representatives shall have the right to inspect supplier's premises with a view to evaluating the actual progress of work on the basis of seller's time schedule documentation.
- 14.3.2 Irrespective of such inspection, supplier shall advise consultant, with copy to purchaser, at the earliest possible date of any anticipated delay in the progress.
- 14.3.3 Notwithstanding the above, in case progress on the execution of contract at various stages is not as per phased time schedule and is not satisfactory in the opinion conclusive or supplier shall neglect to execute the contract with due diligence and expedition or shall contravene the provisions of the contract owner may give notice of the same in writing to the supplier calling upon him to make good the failure, neglect or contravention complained of. Should Supplier fail to comply with such notice within the period considered reasonable by owner the owner shall have the option and be at liberty to take the contract wholly or in part out of the supplier's hand and make alternative arrangements to obtain the requirements and completion of contract at the supplier's risk and cost and recover from the supplier, all extra cost incurred by the owner on this account. In such event owner shall not be responsible for any loss that the supplier may incur and supplier shall not be entitled to any gain. Owner shall, in addition, have the right to encase performance Guarantee in full or part.

15.0 Delivery & Documents

- 15.1 Delivery of the goods shall be made by the supplier in accordance with specified in the contract, and the goods shall remain at the risk of the Supplier until delivery has been completed.
- 15.2 Delivery shall be deemed to have been made:
 - a) In case of FOT dispatch point contract, on evidence that the goods have been loaded on the carrier and a negotiable copy of the goods receipt obtained. The date of LR /GR shall be considered as the date of delivery.
 - b) In case of FOT site, on receipt of goods by owner at the designated site's.
- 15.3 The delivery terms are binding and essential and consequently, no delay is allowed without the written approval of owner. Any

request concerning delay will be void unless accepted by owner through a modification of the contract.

- 15.4 Delivery time shall include time for submission of drawings for approval, incorporation of comments, if any, and final approval of drawings by owner.
- 15.5 In the event of delay in delivery, price reduction schedule as stipulated in Article -26 shall apply.
- 15.6 The documentation, in English language, shall be delivered in due time, in proper; form and in the required number of copies as specified in the contract.
- 15.7 The additional copies of final drawings and instructions will be included in the package of goods, properly enveloped and protected.
- 15.8 The supplier should comply with the packing, marking and shipping documentation specifications enclosed.

16.0 Transit Risk

16.1 All goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation storage and delivery.

Insurance Requirements:

All Transit risk insurance shall be in the scope of Bidder.

17.0 Transportation 17.1

Where the supplier is required under the contract to deliver the goods at FOT site, all expenses shall be arranged and paid for by the seller and the Cost thereof shall be included in the contract price's.

18.0 Incidental Services

- 18.1 The supplier may be required to provide any or all of the following Services:
 - 18.1.1 Performance or supervision of onsite assembly and/or start up of the supplied goods.
 - 18.1.2 Furnishing tools required for assembly and/or maintenance of the supplied Goods.
 - 18.1.3 Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warrantee/guarantee obligations under the contract.
 - 18.1.4 Training of the Owner's personnel at supplier's plant and/ or at site, in assembly, start-up operation, maintenance and/or repair of the supplied Goods at no extra cost. However, Owner will bear boarding, lodging & personal expenses of Trainees.

- 19.0 **Spare Parts Maintenance Tools Lubricants**
- 19.1 Supplier may be required to provide any or all of the following materials & notification pertaining to spare parts manufactured or distributed by the supplier.
- 19.2 In the event of termination of production of the spare parts:
- i) Advance notification to the Owner of the pending termination, in sufficient time to permit the Owner procure needed requirements, and
 - ii) Following such termination, furnishing at no cost to the owner, the blue prints, drawings and specifications of procure needed requirements, and
- 19.3 Supplier shall supply item wise list with value of each item of spare parts and maintenance tools requirements, along with full details of manufacturers/vendors for such spares/maintenance tools for :
- 19.4 The construction, execution and commissioning.
- 19.5 Two (2) years operation and maintenance.
- 19.6 Spare parts shall be new and of first class quality as per engineering standards/ codes free of any defects (even concealed), deficiency in design, materials and with the corresponding parts.
- 19.7 Type and sizes of bearings shall be clearly indicated.
- 19.8 Spare parts shall be packed for long storage under tropical climatic conditions in suitable cases, clearly marked as to intended purpose.
- 19.9 A list of special tools and gauges required for normal maintenance and special handling and lifting appliances, if any, for the goods shall be submitted to owner.
- 19.10 Bidders should note that if they do not comply with Clause 19.2 above, their quotation may be rejected.
- 19.11 Lubricants
- 19.12 Whenever lubricants are required, supplier shall indicate the quantity of lubricants required for the first filing, the frequency of changing, the quantity of lubricants required for the one years continuous operation and the types; of recommended lubricants indicating the commercial name (Trademark), quality and grade.
- 19.13 If Supplier is unable to recommend specific oil, basic recommended characteristics of the lubricants shall be given.
- 19.14 Supplier shall indicate various equivalent lubricants available in India.

20.0 **Guarantee**20.1

All Goods or materials shall be supplied strictly in accordance with the specifications, drawings, data sheets, other attachments and conditions stated in the Contract.

No deviation from such specifications or alterations or of these conditions shall be made without OWNER'S agreement in writing which must be obtained before any work against the order is commenced. All materials supplied by the supplier pursuant to the Contract (irrespective of whether engineering, design data or other information has been furnished, reviewed or approved by owner are guaranteed to be of the best quality of their respective kinds (unless otherwise specifically authorized in writing by owner and shall be free from faulty design, workmanship and materials, and to be of sufficient size and capacity and of proper materials so as to fulfill in all respects all operating conditions, if any, specified in the contract.

If any trouble or defect, originating with the design, material, workmanship or operating characteristics of any materials, arises at any time prior to twelve (12) months from the date of the first commercial operation of the plant for which the materials supplied under the contract form a part thereof, or twenty four (24) months from the date of last shipment whichever period shall first expire, and the supplier is notified thereof, supplier shall, at his own expense and as promptly as possible, make such repairs to the materials to function in accordance with the specifications and to fulfill the foregoing guarantees.

Owner may, at his option, remove such defective materials, at supplier's expense in which event supplier shall, without cost to owner and as promptly as possible, furnish and install proper materials. Repaired or replaced materials shall be similarly guaranteed by the supplier for a period of no less than twelve (12) months from the date of replacement/repair.

In the event that the materials supplied do not meet the specifications and /or not in accordance with the drawings data sheets or the terms of the contract and rectification is required at site, Owner shall notify the supplier giving full details of differences. The supplier shall attend the site within seven (7) days of receipt of such notice to meet and agree with representatives of owner, the action required to correct the deficiency. Should the supplier fail to attend meeting at site within the time specified above work/materials and supplier shall reimburse owner all costs and expenses incurred in connection with such trouble or defect.

20.2 **PERFORMANCE GUARANTEE OF EQUIPMENT**

20.2.1 Supplier shall guarantee that the performance of the Equipment supplied under the contract shall be strictly in conformity with the

specifications and shall perform the duties specified under the Contract.

20.2.2 If the Supplier fails to prove the guaranteed performance of the equipment set forth in the specification, the Supplier shall investigate the causes and carry out necessary rectifications/modifications to achieve the guaranteed performance. In case the supplier fails to do so within a reasonable period, the supplier shall replace the equipment and prove guaranteed performance of the new equipment without any extra cost to purchaser.

20.2.3 If the Supplier fails to prove the guarantee within a reasonable period, owner shall have the option to take over the Equipment and rectify, if possible, the equipment to fulfill the guarantees and/or to make necessary additions to make up the deficiency at supplier's risk and cost. All expenditure incurred by the owner in this regard shall be to supplier's account.

21.0 TERMS OF PAYMENT: 100% Payment along with 100% taxes, duties, freight and other levies (if applicable) shall be released against receipt of material at store/site on submission of PBG @10% of order value, final dispatch documents and dispatch clearance from CUGL. Vendor shall submit following documents for getting payments from CUGL

- (i) GST Invoice
- (ii) All test certificates with one set of copy
- (iii) Packing List
- (iv) LR
- (v) IRN (inspection Release Note)

22.0 Prices

22.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not, with the exception of any price adjustments authorized by the contract vary from the prices quoted by the supplier in his bid.

23 Subletting & Owner's

23.1 The supplier shall not without previous consent in writing of assignment authority, sublet, transfers or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.

24 Time As Essence 24.1

The time and date of delivery/completion of the goods/services as stipulated in the contract shall be deemed to be the essence of the contract.

25 Delays Seller's Performance

25.1 If the specified delivery schedule is not adhered to or the progress of manufacture or supply of the items is not satisfactory or is not in accordance with the progress schedule the Owner has right to :

- i) Hire for period of delay from elsewhere goods which in Owner's opinion will meet the same purpose as the goods which are delayed and supplier shall be liable without limitation for the hire charges; or
- ii) Cancel the contract in whole or in part without liability for cancellation charges. In that event, Owner may procure from elsewhere goods which Owner's opinion would meet the same purpose as the goods for which Contract is cancelled and Supplier shall be liable without limitations for the difference between the cost of such substitution and the price set forth in the contract for the goods involved; or
- iii) Hire the substitute goods vide (1) above and if the ordered goods continue to remain undelivered thereafter, cancel the order in part or in full vide (ii) above.
- iv) Any inexcusable delay by the Supplier or his subcontractor shall render the Supplier liable, without prejudice to any other terms of the Contract, to any or all of the following sanctions: forfeiture of Contract performance guarantee, imposition of price reduction for delay in delivery and termination of the contract for default.

26 Price Reduction 26.1

In case, vendor fail to complete the work within the stipulated period, then unless such failure is due to force majeure as defined in the bid document, total contract price shall be reduced @ 0.5% of the total order value (lot wise) per week of delay or part thereof subject to a maximum of 5% of the total order price (lot wise).

The decision of the Engineer-In-Charge in regard to applicability of PRS shall be final and binding on the Vendor.

In case of delay on the part of the Vendor the invoice shall be submitted after applicable price reduction.

27 Rejections, Removal Rejected Equipment & Replacement

- 27.1** Preliminary inspections at Supplier's works by Inspector shall not prejudice purchase's claim for rejection of the equipment on final inspection at site or claims under warranty provisions.
- 27.2** If the equipments are not of specification or fail to perform specified duties or are otherwise not satisfactory the owner shall be entitled to reject the equipment/material or part thereof and ask free replacement within reasonable time failing which obtain his requirements from elsewhere at Supplier's cost and risk.
- 27.3** Nothing in this clause shall be deemed to deprive the Owner and/or affect any rights under the contract which it

may otherwise have in respect of such defects or deficiencies or in any way relieve the supplier of his obligations under the Contract.

27.4 Equipment rejected by the Owner shall be removed by the supplier at his cost within 14 days of notice after repaying the amounts received against the supply. The owner shall in no way be responsible for any deterioration or damage to the Equipment under any circumstances whatsoever.

27.5 In case of rejection of Equipment, Owner shall have the right to recover the amounts, if any, from any of contractor's invoices pending with Owner or by alternative method(s)

28 Termination of Contract

28.1 Terminations for Default

28.1.1 The Owner may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the Contract in whole or in part

A) If the Supplier fails to deliver any or all of the goods within the time

B) If the Supplier fails to perform any other obligation(s) under the Contract, and

C) If the Supplier, in either of the above circumstances, does not cure his failure within a period of 30 days (or such longer period as the Owner may authorize in writing) after receipt of the default notice from the Owner.

28.1.2 In the event the Owner terminates the Contract in whole or in part, pursuant to Article 28.1.1, the Owner may procure, upon such terms and in such undelivered and the Supplier shall be liable to the Owner for any excess costs for such similar performance of the Contract to the extent not terminated.

28.1.3 In case of termination of contract herein set forth (under clause 28) except under conditions of Force Majeure and termination after expiry of contract, the SUPPLIER shall be put under holiday i.e. neither any enquiry will be issued to the party by CUGL Against any type of tender nor their offer will be considered by CUGL against any ongoing tender(s) where contract between CUGL and that particular SUPPLIER (as a bidder) has not been finalized) for three years from the date of termination by CUGL to such SUPPLIER.

28.2 Termination for Insolvency

28.2.1 The Owner may, by written notice sent to the Supplier, terminate the Contract, in whole or part, at any time for his convenience. The notice of termination shall specify that termination is for the Owner's convenience, the extent to which performance of work under the Contract is

terminated and the date upon which such termination becomes effective.

28.3 Termination for Convenience

28.3.1 The Owner may, by written notice sent to the Supplier, terminate the Contract, in whole or part, at any time for his convenience. The notice of termination shall specify that termination is for the Owner's convenience, the extent to which performance of work under the Contract is terminated and the date upon which such termination becomes effective.

28.3.2 The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be purchased by the Owner at the Contract terms and prices. For the remaining Goods, the Owner may opt:

- a) to have any portion completed and delivered at the Contract terms and prices, and/ or
- b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

29 **Force Majeure**

29.1 Shall mean and be limited to the following:

- a) War/hostilities
- b) Riot or Civil commotion
- c) Earthquake, flood, tempest, lightening or other natural physical disaster.
- d) Restrictions imposed by the Government or other statutory bodies, which prevents or delays the execution of the Contract by the Seller

The Supplier shall advise Owner by a registered letter duly certified by the local Chamber of Commerce or statutory authorities, the beginning and end of the above causes of delay within seven (7) days of the occurrence and cessation of such Force Majeure Conditions. In the event of delay lasting over one month, if arising out of causes of Force Majeure, Owner reserves the right to cancel the Contract and the provisions governing termination stated under Article 28.0 shall apply.

For delays arising out of Force Majeure, the Supplier shall not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither Owner nor Supplier shall be liable to pay extra costs provided it is mutually established that Force Majeure Conditions did actually exist,.

Supplier shall categorically specify the extent of Force Majeure Conditions prevalent in their works at the time of submitting their bid and whether the same have been taken into consideration or not in their quotations. In the event of any force Majeure cause, the Supplier or the Owner shall not be liable for delays in performing their obligations under this

order and the delivery date will be extended to the Supplier without being subject to price reduction for delayed deliveries, as stated elsewhere.

- 30 **Resolution of Dispute / Arbitration** **30.1** The Owner and the Supplier shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract.

30.2 If, after thirty days from the commencement of such informal negotiations, the Owner and the Supplier have been unable to resolve amicably a Contract dispute either party may require that the dispute be referred for resolution to the formal mechanism as specified hereunder.

30.3 **Legal Construction**
The contract shall be, in all respects be construed and operated as an Indian Contract and in accordance with Indian Laws as in force for the time being and is subject to and referred to the Court of Law situated within Union Territory of New Delhi.

30.4 Arbitration

All disputes, controversies, or claims between the parties (except in matters where the decision of the Engineer-in-charge is deemed to be final and binding), which cannot be mutually resolved within a reasonable time, shall be referred to Arbitration by a sole arbitrator

The OWNER (CUGL) shall suggest a panel of three independent and distinguished persons to the Supplier to select any one among them to act as the sole Arbitrator, In case event of failure of the Supplier to select the Sole Arbitrator within 30 days from the receipt of the communication suggesting the panel of arbitrator, the right of selection of Sole Arbitrator by the other party shall stand forfeited and the Owner shall have discretion to proceed with the appointment of the Sole Arbitrator. The decision of the Owner on the appointment of Sole Arbitrator shall be final and binding on the parties.

The award of the Sole Arbitrator shall be final and binding on the parties and unless directed/awarded otherwise by the sole Arbitrator, the cost of arbitration proceedings shall be shared equally by the parties. The arbitration proceeding shall be in English language and the venue shall be at Kanpur, Uttar Pradesh, India.

Subject to the above, the provisions of (Indian) Arbitration & Conciliation Act, 1996 and the rules framed hereunder shall be applicable. All matters relating to this contract are

subject to the exclusive jurisdiction of the Courts situated in the State of Delhi (India)

Supplier may please note that the Arbitration & Conciliation Act 1996 was enacted by the Indian Parliament and is based on United Nations Commission on International Trade Law (UNCITRAL model law). Which were prepared after extensive consultation with Arbitral Institutions and centers of International Commercial Arbitration The United Nations General Assembly vide resolution 31/98 adopted the UNCITRAL Arbitration rules on 15 December 1996.

The WORKs under the CONTRACT shall, however, continue during the Arbitration proceedings and no payment due or payable to the Supplier shall be withheld on account of such proceedings.

31 Governing Language

31.1 The Contract shall be written in English language as specified by the Owner in the instruction to Bidders. All literature, correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in English language. Printed literature in other language shall only be Considered, if it is accompanied by an English translation. For the purposes of interpretation English translation shall govern and be binding on all parties.

32 Notices

32.1 Any notice given by one party to the other pursuant to the Contract shall be sent in writing or by telegram or fax, telex/cable confirmed in writing.

32.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

33 Taxes & Duties

33.1 A foreign supplier shall be entirely responsible for all taxes stamp duties, license fees, and other such levies imposed outside the Owner's country.

33.2 A domestic Supplier shall be entirely responsible for all taxes, duties, license fees etc. incurred until the delivery of the contracted goods to the owner. However, Sales Tax and Excise Duty on finished products shall be reimbursed by Owner.

33.3 Customs duty payable in India for imported goods ordered by Owner on foreign supplier shall be borne and paid by Owner

33.4 Any income tax payable in respect of supervisory services rendered by foreign supplier under the Contract shall be as per the Indian Income Tax Act and shall be borne by Supplier. It is up to the bidder/supplier to ascertain the amount of these taxes and to include them in his bid price.

34 Books & records

34.1 Supplier shall maintain adequate books and records in connection with contract and shall make them available for inspection and audit by Owner or their authorized agents or representatives during the terms of Contract until expiry of the performance guarantee. Fixed price (lump sum or unit price) Contract will not be subject to audit as to cost except for cost reimbursable items, such as escalation and termination claims, transportation and comparable requirements.

35 Permits & Certificate

35.1 Supplier shall procure, at his expense, all necessary permits, certificates and duties, license fees, and other such levies imposed outside the licenses required by virtue of all applicable laws, regulations, ordinances and other rules in effect at the place where any of the work is to be performed, and supplier further agrees to hold Owner and / or harmless from liability or penalty which might be imposed by reason of any asserted or established violation of such laws, regulations, ordinances or other rules. Owner will provide necessary permits for Supplier personnel to undertake any work in India in connection with Contract.

36.General

In the event that and conditions stipulated in the General Condition of Contract should deviate from terms and conditions stipulated in the Contract, the latter shall prevail.

36.1 Losses due to non-compliance of Instructions
Losses or damages occurring to the Owner owing to the Supplier's
Failure to adhere to any of the instructions given by the Owner in connection with the contract execution shall be recoverable from the Supplier.

36.2 Recovery of sums due

All costs, damages of expenses which the Owner may have paid, for which under the Contract Supplier is liable, may be recovered by the Owner (he is hereby irrevocably authorized to do so) from any money due to or becoming due to the Supplier under this contract or other Contracts and/or may be recovered by action at law or otherwise. If the same due to the Supplier be not sufficient to recover the recoverable amount, the Supplier shall pay to the Owner, on demand, the balance amount.

36.3 Payments, etc. not to affect rights of the Owner No sum paid on account by the Owner nor any extension of the date for completion granted by the Owner shall affect or prejudice the rights of the Owner against the Supplier or relieve the Supplier of his obligation for the due fulfillment of the Contract.

36.4 **Cut-off Dates**

No claims or correspondence on this Contract shall be entertained by there Owner after 90 days after expiry of the performance guarantee (from the date of final extension) if any.

36.5 **Paragraph heading**

The Paragraph heading in these conditions shall not affect the construction thereof.

37 Import License

37.1 No import license is required for the imports covered under this document.

38 Fall Clause

38.1 The price charged for the materials supplied under the order by the supplier shall in no event exceed the lowest price at which the supplier or his agent/principal/dealer, as the case may be, sells the materials of identical description to any persons/organizations including the Owner of any department of the Central Govt. or any Department of a State Govt. or any Statutory Undertaking of the Central of State Govt. as the case may be, during the currency of the order.

38.2 If at any time during the said period, the supplier or his agent/principal/dealer, as the case may be, reduces the sale price, sells or offers to sell such materials to any persons/organizations including the Owner or any Department. Of Central Govt. or State Govt. as the case may be , at price lower than the price chargeable under the order, he shall forthwith notify such reduction or sale or offer of sale to the Purchase Authority who has issued this order and the price payable under the order for the materials supplied after the date of coming into force of such reduction or sale or offer of sale shall stand correspondingly reduced.

The above stipulation will, however, not apply to :

- a) Exports by the Contractor/Supplier or
- b) Sale of goods as original equipment a prices lower than thee prices charged for normal replacement
- c) Sale of goods such as drugs, which have expiry dates.

38.3 The supplier shall furnish the following certificate to the concerned Paying Authority along with each bill for payment for supplies made against this order:-

I/We certify that there has been no reduction in sale price of the items/goods/materials of description identical to those supplied to the CUGL under the order herein and such items/goods/materials have not been offered/sold by me/us to any person/organizations including the Purchaser or any Department. Of Central Govt. or any Department. Of State govt. or any Statutory Undertaking of the Central or State Govt. as the case may be up to the date of bill/during the currency of the order whichever is later, at a price lower than the price charged to the CUGL under the order.”

Such a certificate shall be obtained, except for quantity of items/goods/materials categories under sub-clause (a), (b) & (c) of sub-Para 38.2 above, of which details shall be furnished by the supplier.

39Publicity

39.1 Supplier shall not without the written permission of Owner or any Company affiliated with Owner or to the destination or the description of goods or services supplied under the contract in any publication, publicity or advertising media.

40 Repeat Order

40.1 Prices and discounts, if any and other terms & conditions shall also remain valid up to twelve months from the placement of notification of award (Fax of Intent) for the purpose of placement of repeat order up to 100% ordered quantity

41 Limitation of Liability

41.1 notwithstanding anything contrary contained herein] the aggregate total liability of Supplier under the Agreement or otherwise shall be limited to 100% of Agreement / Order price. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production

BEC

(BID EVALUATION CRITERIA)

SECTION -IV

(BID EVALUATION CRITERIA)

TECHNICAL CRITERIA

1. The bidder must be a regular manufacturer of MDPE pipes (PE 80 /PE 100) of different sizes having testing and quality assurance facilities as per the applicable codes IS 14885 (latest edition) or Pr EN 1555-2 or ISO 4437 confirming to T4S specifications.
2. The bidder must have supplied below mentioned quantity against respective SOR item to City Gas Distribution company in India for Natural gas application under a single order/contract during last Seven years reckoned from the bid due date.

Sr. no	SOR Item	Minimum BEC-Requirement (Qty.in meters)
1	MDPE 125 mm	12,500
2	MDPE 63 mm	35,000
3	MDPE 32 mm	50,000
4	MDPE 20 mm	12,500

3. The documents required to be submitted by the bidder to substantiate their qualification under Bid Evaluation Criteria shall be as follows:
 - a) Copies of Purchase order (s)/ Delivery Order with SOR
 - b) Inspection release note(s)/ Dispatch clearance note issued by Purchaser/ Consultant or their authorized representative.
 - c) Reference list of previous supplies to CGD companies in India.
4. For running contract, if the actual executed Quantity (for partially executed contract) is equal to or more than the quantity indicated above one day prior to the due date of bid submission, the same shall also be considered for meeting the single order quantity criteria, for which a certificate from the client showing executed Quantity prior to the due date of bid submission shall be submitted by the bidder along with copy of work order/ agreement or Inspection Release note(s)/ Dispatch clearance note issued by Purchaser/ Consultant or their authorized representative for the same quantity.
5. The copies of work order/ agreement and execution certificate from client or

Inspection release note(s)/Dispatch clearance note issued by Purchaser/ Consultant or their authorized representative should be duly certified/ attested by notary public with legible stamp.

6. It shall be noted that in case bidder fails to submit requisite details/documents, the bid submitted by them is liable to be rejected.
7. CUGL decision shall be final with respect to bidder's qualification based on bidder evaluation criteria.

FINANCIAL CRITERIA

Annual Turnover

The minimum annual turnover achieved by the Bidder as per their audited financial results during any one of the preceding three (03) financial years should be as below:

Minimum annual Turn Over:

Sr. no	SOR Item	Minimum annual Turn Over (Amount in Lacs)
1	MDPE 125 mm	157.76
2	MDPE 63 mm	108.26
3	MDPE 32 mm	58.97
4	MDPE 20 mm	17.27

Net worth

Net worth of the Bidder should be positive as per the last audited financial statement.

Working capital

The minimum working capital of the Bidder as per the last audited financial statement should be as below;

Sr. no	SOR Item	Minimum Working Capital (Amount in Lacs)
1	MDPE 125 mm	31.55
2	MDPE 63 mm	21.65
3	MDPE 32 mm	11.79
4	MDPE 20 mm	3.45

If the bidder's working capital is inadequate, the bidder shall supplement this with letter issued by his Banker, having a net worth not less than INR 100 Crores confirming the availability of line of credit to meet the specified working capital requirement.

In case of tenders having the bid closing date up to 30th September of the relevant financial years and audited financial results of immediate 3 (three) preceding financial

years being not available, the bidder has an option to submit the audited financial results of three years immediately prior to that relevant financial year. Wherever, the bid closing date is after 30th September of the relevant financial year, bidder has to compulsorily submit the audited financial results of immediate preceding three financial years.

Bidder shall meet the qualification criteria as stated Bid Evaluation Criteria. Bidder shall furnish following documents along with the bid, to justify meeting the stipulated qualification criteria.

- Annual audited reports including Balance Sheets and Profit & Loss account statement for which the data to be provided so that the data provided above can be verified. In case, Audit is not mandatory as per the Statutory Norms for Bidder, it is required to submit a copy of his Annual Accounts duly certified by a Chartered Accountant alongwith the copy of Income Tax Return.
- Owner reserves the right to get direct feedback from user on satisfactory performance.

In case the bidder quotes for more than one item, the requirement of Financial criteria shall be on cumulative basis for the quoted items. However, the requirement of Technical criteria shall be on item wise basis for respective items.

Price Evaluation shall be done on Item wise lowest quote basis.

If bidder fails to provide the requisite documents, CUGL reserves the right to reject the Bid.

FORMS & FORMATS

SECTION-V

F-1

BIDDER'S GENERAL INFORMATION

To,
Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India_____

TENDER NO:

SUB :

1	Bidder Name	
2	Status of Firm	Proprietorship Firm/Partnership firm/ Limited/Others If Others Specify:_____ [Enclose certificate of Registration]
3	Name of Proprietor/Partners/Directors of the firm/company	
4	Whether supplier/ manufacturer / Dealer/ Trader/ Contractor	
5	Number of Years in Operation	
6	Address of Registered Office: *In case of Partnership firm, enclose letter mentioning current address of the firm and the full names and current addresses of all the partners of the firm.	 City: District: State: PIN/ZIP:
7	Operation Address (if different from above)	 City: District: State: PIN/ZIP:
8	Telephone Number	_____ (Country Code) (Area Code) (Telephone No.)

9	E-mail address	
10	Website	
11	Fax Number:	_____ (Country Code) (Area Code) (Telephone No.)
12	ISO Certification, if any	{If yes, please furnish details}
13	Bid Currency	
14	Banker's Name	
15	Branch Name & IFSC Code	
17	Bank account number	
18	PAN No.	[Enclose copy of PAN Card]
19	EPF Registration No.	[Enclose copy of EPF Registration Certificate]
20	ESI code No.	[Enclose copy of relevant document]
21	GST No.	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-2
BID FORM

To,
Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:
TENDER NO:

Dear Sir,

After examining / reviewing the Bidding Documents for the tender of
“_____” including
"Specifications & Scope of Work", "General Conditions of Contract [GCC]", "Special
Conditions of Contract [SCC]" and "Schedule of Rates [SOR]", etc. the receipt of which is
hereby duly acknowledged, we, the undersigned, are pleased to offer to execute the whole part of
the job and in conformity with the said Bid Documents, including Addenda / Corrigenda Nos.
_____.

We confirm that this Bid is valid for a period of "four [04] months" from the date of opening of
"Techno-Commercial / Un-priced Bid", and it shall remain binding upon us and may be accepted
by any time before the expiry of that period.

If our Bid is accepted, we will provide the "Contract Performance Security / Security Deposit"
equal to "_____ of the Contract Price" or as mentioned in Tender Document for the due
performance within "thirty [30] days" of such Award.

Until a final Agreement/Letter of Award is prepared and executed, the tender document
(including addenda/ corrigenda) together with the "Notification of Award" shall constitute a
binding Agreement between us.

We understand that Bidding Document is not exhaustive and any action and activity not
mentioned in Bidding Documents but may be inferred to be included to meet the intend of the
Bidding Documents shall be deemed to be mentioned in Bidding Documents unless otherwise
specifically excluded and we confirm to perform for fulfillment of Agreement and completeness
of the Work in all respects within the time frame and agreed price.

We understand that you are not bound to accept the lowest priced or any Bid that you may
receive.

Place:	[Signature of Authorized Signatory of Bidder]
Date:	Name:
	Designation:
	Seal:

Duly authorized to sign Bid for and on behalf of _____

[Signature of Witness]

Name of Witness:

Address:

F-3
LIST OF ENCLOSURES

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Dear Sir,

We are enclosing the following documents as part of the bid:

1. Power of Attorney of the signatory to the Bidding Document.
2. Document showing annual turnover for the last three years such as annual reports, profit and loss account, net worth etc. along with information as sought in enclosed format F-16
3. Document showing Financial Situation Information as sought in enclosed format F-16
4. Copy of Bidding Documents along with addendum/corrigendum duly signed and sealed on each page, in token of confirmation that Bid Documents are considered in full while preparing the bid and in case of award, work will be executed in accordance with the provisions detailed in Bid Documents.
5. Documentary Evidences showing the Bidder's claim of meeting Technical Criteria as mentioned in Clause 4 of ITB.
6. Bid Security/EMD*
7. Power of Attorney*
8. Duly certified document from chartered engineer and or chartered accountant.

Note: * In case of e-bidding the bidder has the option to submit specified documents in physical form on/before the bid due date or within seven days from the bid opening date. However, scanned copy of these (same) documents must be submitted on-line as part of e-bid before the bid due date/time.

Place:	[Signature of Authorized Signatory of Bidder]
Date:	Name:
	Designation:
	Seal:

FORMAT F-4
PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY / BID
SECURITY"

(To be stamped in accordance with the Stamp Act)

Ref.....

Bank Guarantee No.....

Date.....

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:
TENDER NO:

Dear Sir(s),

In accordance with Letter Inviting Tender under your reference No _____ M/s.
_____ having their Registered / Head Office at _____ (hereinafter called the Tenderer), wish to participate in the said tender for _____

As an irrevocable Bank Guarantee against Earnest Money for the amount of _____ is required to be submitted by the Tenderer as a condition precedent for participation in the said tender which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the _____ Bank at _____ having our Head Office _____ (Local Address) guarantee and undertake to pay immediately on demand without any recourse to the tenderers by Central UP Gas Limited, the amount _____ without any reservation, protest, demur and recourse. Any such demand made by CUGL, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Tenderer.

This guarantee shall be irrevocable and shall remain valid up to _____ [this date should be two (02) months beyond the validity of the bid]. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from M/s. _____ whose behalf this guarantee is issued.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this _____ day of _____ 20__ at _____.

WITNESS:

(SIGNATURE)
(NAME)

(SIGNATURE)
(NAME)
Designation with Bank Stamp

(OFFICIAL ADDRESS)

Attorney as per
Power of Attorney No. _____
Date: _____

INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY"
BY "BANK GUARANTEE"

1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank. In case of foreign Bank, the said Bank's Guarantee to be issued by its correspondent Bank in India on requisite non-judicial stamp paper
2. The expiry date should be arrived at in accordance with "ITB: Clause-15.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB".
4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Fax / Phone from where the Earnest Money Bond has been issued.
6. If a Bank Guarantee is issued by a commercial Bank, then a letter to Employer confirming its net worth is more than Rs. 1,000,000,000.00 [Rupees One Hundred Crores] or equivalent alongwith documentary evidence.

F-4A
PROFORMA OF "LETTER OF CREDIT" FOR "EARNEST MONEY / BID SECURITY"

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Irrevocable and confirmed Letter of Credit No. Amount: Rs.
..... Validity of this Irrevocable:
..... (in India) Letter of Credit (2
months beyond validity of Offer)

Dear Sir,

1. You are hereby authorized to draw on (Name of Applicant with full address) for a sum not exceeding available by your demand letter (draft) on them at sight drawn for Rs. accompanied by a certificate by Central UP Gas Limited, with the Tender No. duly incorporated therein, that one or more of the following conditions has/have occurred, specifying the occurred condition(s):

(i) The Bidder withdraws its Bid during the period of Bid validity or any extension thereof duly agreed by the Bidder.

(ii) The Bidder varies or modifies its Bid in a manner not acceptable to CUGL (India) Limited during the period of bid validity or any extension thereof duly agreed by the Bidder.

(iii) The Bidder, having been notified of the acceptance of its Bids,

(a) Fails or refuses to execute the Supply Order/Contract

(b) Fails or refuses to furnish the Contract Performance Security within 30 days before expiry of Bid Security.

(c) Fails to accept arithmetic corrections as per tender conditions.

2. This Irrevocable Letter of Credit has been established towards Bid Security Tender No for (Item)

3. We hereby guarantee to protect the Drawers, Endorsers and bonafide holders from any consequences, which may arise in the event of the non-acceptance or non-payment of Demand Letter (draft) in accordance with the terms of this credit.

4. This Credit is issued subject to the Uniform Customs and Practices for Documentary Credits International Chamber of Commerce brochure No. 600.
5. Please obtain reimbursement as under:
6. All foreign as well as Indian bank charges will be on the account of M/s. (Applicant)

FOR

Authorized Signature
(Original Bank)

Counter Signature

F-5
LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending Subsequent 'Negotiations' / 'Pre-Bid Meetings' / 'Un-priced Bid Opening' / 'Price Bid Opening']

Ref:

Date:

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024

India

SUB:

TENDER NO:

Dear Sir,

I/We, _____ hereby authorize the following representative(s) for attending any 'Negotiations' / 'Meetings [Pre-Bid Meeting]', 'Un-priced Bid Opening', 'Price Bid Opening' and for any subsequent correspondence / communication against the above Bidding Documents:

[1] Name & Designation _____ Signature _____

Phone/Cell: _____

Fax: _____

E-mail: @

[1] Name & Designation _____ Signature _____

Phone/Cell: _____

Fax: _____

E-mail: @

[2] Name & Designation _____ Signature _____

Phone/Cell: _____

Fax: _____

E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Note: This "Letter of Authority" should be on the "**letterhead**" of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders

authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to CUGL.

F-6
"NO DEVIATION" CONFIRMATION

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Dear Sir,

We understand that any 'deviation / exception' in any form may result in rejection of Bid. We, therefore, certify that we have not taken any 'exception / deviation' anywhere in the Bid and we agree that if any 'deviation / exception' is mentioned or noticed, our Bid may be rejected.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

F-7

**DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION,
COURT RECEIVERSHIP**

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

Dear Sir,

We hereby confirm that we are not on 'Holiday' by CUGL or banned by Government department/ Public Sector on due date of submission of bid.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

In case it comes to the notice of CUGL that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per provision of tender document.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to CUGL by us.

Place:	[Signature of Authorized Signatory of Bidder]	Date:
	Name:	
	Designation:	
	Seal:	

F-8
CERTIFICATE FOR NON-INVOLVMENT OF GOVT. OF INDIA

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Dear Sir,

If we become a successful Bidder and pursuant to the provisions of the Bidding Documents, award is given to us for the tender for “
_____”, the following
Certificate shall be automatically enforceable:

"We agree and acknowledge that the Employer is entering into the Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Employer is authorized to enter into Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Employer is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."

Place:

[Signature of Authorized Signatory of Bidder] Date:

Name:

Designation:

Seal:

F-9
PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE
SECURITY / SECURITY DEPOSIT"
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

To,
Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India
PERFORMANCE GUARANTEE No.

Dear Sir(s),

M/s. _____
having registered office at _____ (herein after called the "contractor"
which expression shall wherever the context so require include its successors and assignees)
have _____ been _____ awarded _____ the _____ work _____ of
_____ vide LOA /FOA No.
_____ dated _____ for Central U.P. Gas Limited, Kanpur

The Contract conditions provide that the CONTRACTOR shall pay a sum of Rs.
_____ (Rupees _____) as
full Contract Performance Guarantee in the form therein mentioned. The form of payment
of Contract Performance Guarantee includes guarantee executed by Nationalized Bank,
undertaking full responsibility to indemnify CUGL, in case of default.

The said _____ has approached us and
at their request and in consideration of the premises we having our office at
_____ have agreed to give such guarantee as hereinafter
mentioned.

1. We

_____ hereby undertake to give the irrevocable & unconditional guarantee to you that if
default shall be made by M/s. _____ in
performing any of the terms and conditions of the tender or in payment of any
money payable to Central U.P. Gas Limited we shall on first demand pay without
demur, contest, protest and/ or without any recourse to the contractor to you in such
manner as you may direct the said amount of Rupees
_____ only or such portion thereof not exceeding the
said sum as you may require from time to time.

2. You will have the full liberty without reference to us and without affecting this
guarantee, postpone for any time or from time to time the exercise of any of the

powers and rights conferred on you under the contract with the said _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said _____ and such postponement forbearance would not have the effect of releasing the bank from its obligation under this debt.

3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission our commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. This guarantee shall be irrevocable and shall remain valid upto _____ (this date should be 90 days after the expiry of defect liability period) _____. The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee. However, if for any reason, the contractor is unable to complete the work within the period stipulated in the contract and in case of extension of the date of completion resulting extension of defect liability period of the contractor fails to perform the work fully, the bank hereby agrees to further extend this guarantee at the instance of the contractor till such time as may be determined by the owner. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____ (contractor) on whose behalf this guarantee is issued.
6. The Bank Guarantee's payment of an amount is payable on demand and in any case within 2 working days of the presentation of the letter of invocation of Bank Guarantee. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the jurisdiction of KANPUR Courts.
7. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Contractor up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Contractor to be in default under the contract and without

caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.

8. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.

Yours faithfully,

Bank by its Constituted Attorney

Signature of a person duly
Authorized to sign on behalf of the
Bank

INSTRUCTIONS FOR FURNISHING
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK
GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said Bank Guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper and place of Bid to be considered as Delhi.
2. The Bank Guarantee by Bidders will be given from bank as specified in Tender.
3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Employer.
4. If a Bank Guarantee is issued by a commercial bank, then a letter to Employer and copy to Consultant (if applicable) confirming its net worth is more than Rs. 100,00,00,000.00 [Rupees One Hundred Crores] or its equivalent in foreign currency alongwith documentary evidence.

F-10
AGREED TERMS & CONDITIONS

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

This Questionnaire duly filled in, signed & stamped must form part of Bidder's Bid and should be returned along with Un-priced Bid. Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1	Bidder's name and address	
2.	Please confirm the currency of quoted prices is in Indian Rupees.	
3.	Confirm quoted prices will remain firm and fixed till complete execution of the order.	
4	Rate of applicable Service Tax & Edu. Cess thereon	SEC----- Total %
5.	i) Confirm acceptance of relevant Terms of Payment specified in the Bid Document. ii) In case of delay, the bills shall be submitted after deducting the price reduction due to delay.	
6.	Confirm that Contract Performance Bank Guarantee will be furnished as per Bid Document.	
7.	Confirm that Contract Performance Bank Guarantee shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	
8.	Confirm compliance to Completion Schedule as specified in Bid document. Confirm contract period shall be reckoned from the date of Fax of Acceptance.	
9.	Confirm acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document.	
10.	a) Confirm acceptance of all terms and conditions of Bid Document (all sections). b) Confirm that printed terms and conditions of bidder are not applicable.	
11.	Confirm your offer is valid for 3 months from Final/Extended due date of opening of Techno-commercial Bids.	
12.	Please furnish EMD/Bid Security details : a) EMD/ Bid Security No. & date b) Value c) Validity	
13.	Confirm acceptance to all provisions of ITB	
14.	Confirm that Annual Reports for the last three	

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	financial years are furnished alongwith the Un-priced Bid.	
15.	Confirm that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	
16.	Confirm the none of Directors of bidder is a relative of any Director of Owner or the bidder is a firm in which any Director of Owner/ CUGL or his relative is a partner.	
17.	All correspondence must be in ENGLISH language only.	
18	Owner reserves the right to make any change in the terms & conditions of the TENDER/BIDDING DOCUMENT and to reject any or all bids.	
19	Confirm that all Bank charges associated with Bidder's Bank shall be borne by Bidder.	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-11
ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of tender document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail/fax to concerned executive in CUGL issued the tender, by filling up the Format)

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Dear Sir,

We hereby acknowledge receipt of a complete set of bidding document along with enclosures for subject item/job and/or the information regarding the subject tender.

We intend to bid as requested for the subject item/job and furnish following details with respect to our quoting office:

Postal Address with Pin Code :

Telephone Number :

Fax Number :

Contact Person :

E-mail Address :

Mobile No. :

Date :

Seal/Stamp :

We are unable to bid for the reason given below:

Reasons for non-submission of bid:

Agency's Name :

Signature :

Name :

Designation :

Date :

Seal/Stamp :

F-12
UNDERTAKING ON LETTERHEAD

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Dear Sir

We hereby confirm that “The contents of this Tender Document No. _____ have not been modified or altered by M/s.(Name of the bidder with complete address). In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by M/s.....(Name of the bidder) shall be liable for rejection”.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-13
BIDDER'S EXPERIENCE

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

SUB:

TENDER NO:

Sl. No	Description of the Services	LOA /WO No. and date	Full Address & phone nos. of Client. <i>Name, designation and address of Engineer/ Officer-in-Charge (for cases other than purchase)</i>	Postal & phone nos. of Client. <i>Name, designation and address of Engineer/ Officer-in-Charge (for cases other than purchase)</i>	Value of Contract/Order (Specify Currency Amount)	Date of Commencement of Services	Scheduled Completion Time (Months)	Date of Actual Completion	Reasons for delay in execution, if any
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

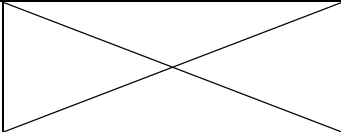
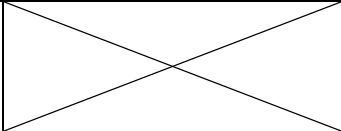
Seal:

F-14
CHECK LIST

Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the bidder to make sure that the necessary data/information as called for in the bid document has been submitted by them along with their offer. This, however, does not relieve the bidder of his responsibilities to make sure that his offer is otherwise complete in all respects.

Please ensure compliance and tick (√) against following points:

S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	on each sheet of offer, original bidding document including SCC, ITB, GCC ,SOR drawings, addendum (if any)		
2.0	Confirm that the following details have been submitted in the Un-priced part of the bid		X
i	Covering Letter, Letter of Submission		
ii	Bid Security		
iii	Signed and stamped original copy of bidding document along with drawings and addendum (if any)		
iv	Power of Attorney in the name of person signing the bid.		
v	Copies of documents defining constitution or legal status, place of registration and principal place of business of the company		
vi	Bidders declaration that regarding, Holiday/ Banning, liquidation court receivership or similar proceedings		
vii	Details and documentary proof required against qualification criteria along with complete documents establishing ownership of equipment as per SCC are enclosed		

viii	Confirm submission of document alongwith techno-commercial bid as per bid requirement.		
3.0	Confirm that all forms duly filled in are enclosed with the bid duly signed by authorised person(s)		
4.0	Confirm that the price part as per Price Schedule format submitted with Bidding Document.		
7.0	Confirm that annual reports for last three financial years & duly filled in Form 16 are enclosed in the offer for financial assessment (where financial criteria of BEC is applicable).		

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

**((TO BE INCLUDED ONLY WHERE FINANICAL CRITERIA OF BEC IS
APPLICABLE))**

F-15

**FORMAT FOR CERTIFICATE FROM BANK
IF BIDDER'S WORKING CAPITAL IS INADEQUATE**

(To be provided on Bank's letter head)

Date:

To,

Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhanpur
Kanpur-208024
India

Dear Sir,

This is to certify that M/s (name of the bidder with address) (hereinafter referred to as Customer) is an existing customer of our Bank. The Customer has informed that they wish to bid for CUGL's RFQ/Tender no. dated for(Name of the supply/work/services/consultancy) and as per the terms of the said RFQ/Tender they have to furnish a certificate from their Bank confirming the availability of line of credit. Accordingly M/s (name of the Bank with address) confirms availability of line of credit to M/s (name of the bidder) for at least an amount of Rs. _____

It is also confirmed that the net worth of the Bank is more than Rs. 100 Crores (or Equivalent USD) and the undersigned is authorized to issue this certificate.

Yours truly,

for (Name & address of Bank)

(Authorized signatory)

Name of the signatory :

Designation : Stamp

F-16
FORMAT FOR FINANCIAL CAPABILITY OF THE BIDDER

A. ANNUAL TURNOVER OF LAST 3 YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	

B. FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR :

Description	Year _____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	
4. Net Worth (Paid up share capital and Free Reserves & Surplus)	

Place: [Signature of Authorized Signatory]

Name:

Date: Designation:

Seal:

Instructions:

1. The financial year would be the same as one normally followed by the bidder for its Annual Report.
2. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non responsive.
3. For the purpose of this Tender document, (i) Annual Turnover shall be "Sale value/ Operating Income" (ii) Working Capital shall be "Current Assets less Current liabilities" and (iii) Net Worth shall be "Paid up share capital and Free Reserves & Surplus"

F-17

BIDDER'S QUERIES FOR PRE BID MEETING

To,
Central UP Gas Limited,
7th floor, UPSIDC complex
A-1/4, Lakhapur
Kanpur-208024
India

Sub :
Tender No :

SL. NO.	REFERENCE OF BIDDING DOCUMENT				BIDDER'S QUERY	CUGL'S REPLY
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by fax and also by e-mail before due date for receipt of Bidder's queries.

SIGNATURE OF BIDDER: _____

NAME OF BIDDER : _____

Date

CA CERTIFICATE FORMAT FOR MSE

TO WHOMSOEVER IT MAY CONCERN

This is to Certify that M/s ----- (Company Name) having its registered office at ----- (Address) is registered under MSMED Act 2006 . Entrepreneur Memorandum No. (Part-II) ----- dated ----- Category: -----(Whether Micro or Small).

Further verified from the Books of Accounts that the investment of the company as per last Audited Balance Sheet is as follows:

Investment in Plant and Machinery Rs. ----- (Lakhs)

The above Investment of Rs. ----- Lacs is within permissible limit of Rs. ----- Lacs for ----- (Micro or Small) Category under MSMED Act, 2006. Also, M/s ----- (Company Name) have not exceeded the monetary limit criteria mentioned in the NSIC Certificate

The above format shall be printed on CA's letter head, filled, signed and stamped by a practicing Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) where audited accounts are not mandatory as per law. The certificate should not older than 03 months from the bid due date.

SPECIAL CONDITIONS OF CONTRACT (SCC)

SECTION-VI

SPECIAL CONDITIONS OF CONTRACT

1.0 General

- 1.1 SCC shall be read in conjunction with the General Conditions of Contract, Specification of work, Drawing and any other documents forming part of this Contract wherever the context so requires.
- 1.2 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read within the Contract so far as it may be practicable to do so.
- 1.3 Where any portion of the General Conditions of Contract (GCC) is repugnant to or is at variance with any of the provisions of the SCC and unless a different intention appears, the provisions of the SCC shall prevail over the provisions of the GCC.
- 1.4 Wherever it is mentioned in the specification that the Bidder shall perform certain work or provide certain facilities, it is understood that the Bidder shall do so at his cost and the Value of Contract shall be deemed to be including the cost of such performance and provisions, so mentioned.
- 1.5 The materials, design, and workmanship shall satisfy the relevant Indian / Foreign Standards, the Technical Specifications / Data Sheets contained herein and Codes referred to. Where the job specification stipulates requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
- 1.6 In case of an irreconcilable conflict between Indian or other applicable standards, GCC, SCC, Specification, Drawings or Schedule of Rates (SOR), the following shall prevail to the extent of such irreconcilable conflict and in this order of precedence:
 1. Letter of Acceptance / FOI along with Statement of Agreed Variations.
 2. SOR as enclosures to Letter of Acceptance
 3. SCC
 4. Drawings
 5. Technical / Material Specifications / Data Sheets
 6. Instruction to Bidder
 7. GCC
 8. Applicable standards
- 1.7 It will be the Bidder's responsibility to bring to the notice of Engineer-In-Charge any irreconcilable conflict in the contract documents before starting the work or making the supply with reference to which the conflict exists.
- 1.8 In the absence of any specifications covering any material, design of work the same shall be performed / supplies / executed in accordance with Standard Engineering Practice as per the instructions / directions of the Engineer – In – Charge, which will be binding on the Bidder.

2.0 Definitions

For definitions refer to General Conditions of Contract (GCC)

3.0 Scope of Work

- 3.1 The bidder shall have the single point responsibility of Design, Engineering, Manufacturing and supply of the MDPE pipe to CUGL Kanpur/Bareilly site of required specification.

4.0 Firm Prices

- 4.1 Without prejudice to stipulation in GCC, the bidders should quote firm prices inclusive of all

taxes, duties and other levies and cess on which no variation will be allowed except statutory variation in Excise Duty and Sales Tax during the contractual completion period. Any variation (increase) beyond the Contractual Completion period shall be to SELLERS's account and if there is any decrease the same shall be passed on to the OWNER,

- 4.2 The quoted prices shall not be subject to price escalation during the contract period, for whatever reason except for the statutory variation stipulated above.

5.0 Delivery Schedule

General

- 5.1 The material under the scope of supply shall be delivered to project site as specified in IFB.
5.2 Failing to meet the delivery schedule will be subject to price reduction and/or other remedies available under this contract.

- 5.3 Delivery of MDPE Pipe as per below schedule:

1st Lot: 8 weeks from the date of intimations

Remaining Lots: 8 weeks from the date of intimation within a period of Two year from the date of issue of LOI

Delivery Schedule for MDPE Pipes				
Sr.no	Item Description	Unit	Total Quantity	Lot wise details (Kanpur/Bareilly/Unnao/Jhansi)
				1st Lot (8 weeks from date of LOI)
1	MDPE 20 MM	Mtrs.	240000	25000
2	MDPE 32 MM	Mtrs.	510000	100000
3	MDPE 63 MM	Mtrs.	243000	70000
4	MDPE 125 MM	Mtrs.	91000	25000

Remaining lots: Delivery Order (DO) shall be issued on need basis for remaining quantity.

The above quantities are for any locations of Kanpur, Bareilly, Unnao & Jhansi. However, actual quantity to be confirmed at the time of dispatch clearance for delivery of material for Kanpur, Bareilly, Unnao and Jhansi.

- 5.4 The Material Inspection before dispatch shall be done through Third Party agency hired by CUGL.

6.0 PACKING MARKING AND SHIPMENT

- 6.1 The seller will follow the instruction given in bid document for proper packing and crating of goods for transportation in a manner in accordance with bid specification. The seller shall be held responsible for all damages due to improper packing/dispatch

7.0 Payment Terms

100% payment (lot wise) along with 100% taxes, duties, freight and other levies (if applicable) shall be released within 30 days on submission of invoice, in triplicate, along with following document:

-
- (1.) Tx invoice along with inspection release note by Purchaser/ Consultant /TPIA
 - (2.) Packing List
 - (3.) LR Copy
 - (4.) Dispatch instructions/ clearance by purchase/consultant
 - (5.) Copy of Performance Bank Guarantee (if already submitted)

TECHNICAL SPECIFICATIONS /SCOPE OF SUPPLY SECTION-VII

1.0 General

- 1.1 SCC shall be read in conjunction with the General Conditions of Contract, Specification of work, Drawing and any other documents forming part of this Contract wherever the context so requires.
- 1.2 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read within the Contract so far as it may be practicable to do so.
- 1.3 Where any portion of the General Conditions of Contract (GCC) is repugnant to or is at variance with any of the provisions of the SCC and unless a different intention appears, the provisions of the SCC shall prevail over the provisions of the GCC.
- 1.4 Wherever it is mentioned in the specification that the Bidder shall perform certain work or provide certain facilities, it is understood that the Bidder shall do so at his cost and the Value of Contract shall be deemed to be including the cost of such performance and provisions, so mentioned.
- 1.5 The materials, design, and workmanship shall satisfy the relevant Indian / Foreign Standards, the Technical Specifications / Data Sheets contained herein and Codes referred to. Where the job specification stipulates requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
- 1.6 In case of an irreconcilable conflict between Indian or other applicable standards, GCC, SCC, Specification, Drawings or Schedule of Rates (SOR), the following shall prevail to the extent of such irreconcilable conflict and in this order of precedence:
1. Letter of Acceptance / FOI along with Statement of Agreed Variations.
 2. SOR as enclosures to Letter of Acceptance
 3. SCC
 4. Drawings
 5. Technical / Material Specifications / Data Sheets
 6. Instruction to Bidder
 7. GCC
 8. Applicable standards
- 1.7 It will be the Bidder's responsibility to bring to the notice of Engineer-In-Charge any irreconcilable conflict in the contract documents before starting the work or making the supply with reference to which the conflict exists.
- 1.8 In the absence of any specifications covering any material, design of work the same shall be performed / supplies / executed in accordance with Standard Engineering Practice as per the instructions / directions of the Engineer – In – Charge, which will be binding on the Bidder.

2.0 Definitions

For definitions refer to General Conditions of Contract (GCC)

3.0 Scope of Work

- 3.1 The bidder shall have the single point responsibility of Design, Engineering, Manufacturing and supply of the MDPE pipe specification.

4.0 Firm Prices

- 4.1 Without prejudice to stipulation in GCC, the bidders should quote firm prices inclusive of all taxes, duties and other levies and cess on which no variation will be allowed except statutory variation in Excise Duty and Sales Tax during the contractual completion period. Any variation (increase) beyond the Contractual Completion period shall be to SELLERS's account and if there is any decrease the same shall be passed on to the OWNER,
- 4.2 The quoted prices shall not be subject to price escalation during the contract period, for whatever reason except for the statutory variation stipulated above.

5.0 Delivery Schedule

Mentioned in SCC section

5.1 The prices shall be firmed and fixed for the contract period of 02 year.

6.0 **PACKING MARKINGAND SHIPMENT**

6.1 The seller will follow the instruction given in bid document for proper packing and crating of goods for transportation in a manner in accordance with bid specification. The seller shall be held responsible for all damages due to improper packing/dispatch

TECHNICAL SPECIFICATION FOR POLYETHYLENE PIPES

TABLE OF CONTENTS

1. INTRODUCTION & SCOPE
2. DEFINITIONS
3. PIPE SIZES
4. LENGTH OF PIPES
5. COLOUR
6. MARKING
7. HANDLING AND STORAGE
8. QUALITY ASSURANCE (QA)

1 INTRODUCTION & SCOPE

The present Specification relates to the manufacture of "Polyethylene Line Pipes" for the CUGL City Gas Distribution Project.

The present specification confirms, completes or modifies certain sections/paragraphs of the said General Technical Specifications.

2. DEFINITIONS

Owner/Purchaser/Client/Owner Representative: Company: means CUGL
Manufacturer means the Manufacturer of the pipes as well as its sub-contractor(s).
Third Party Inspection Agency means the Inspection Agency to be appointed by CUGL, Bidder means the party quoting for the pipes.

3. PIPE SIZES

Nominal Dia Di	Thickness	Material
• 20mm	S DR11	PE100 Polyethylene
• 32mm	SDR11	PE100 Polyethylene
• 63mm	SDR11	PE100 Polyethylene
• 125mm	SDR11	PE100 Polyethylene

4. LENGTH OF PIPES

The required minimum lengths are as follows: Nominal Dia

	<u>Lengths</u>
20 mm	200 mtrs
32 mm	200 mtrs
63mm	100 mtrs
125mm	50 mtrs

1. COLOUR

The pipe shall be of ORANGE colour.

6. MARKING

Owner's/Owner Representative name as CUGL be marked on each pipe.

1. HANDLING AND STORAGE

Packaging shall be done in Hessian cloth (Jute) to avoid direct sunlight and facilitate outdoor storage.

8. QUALITY ASSURANCE (QA)

Manufacturer to submit QA system for the approval of Owner /Owner Representative.

Polyethylene pipes for underground networks for natural gas distribution

General requirements

TABLE OF CONTENTS

1. SUBJECT AND AREA OF APPLICATION
2. REFERENCE STANDARDS AND SPECIFICATIONS
3. DEFINITIONS
4. MATERIAL SPECIFICATION
5. CHARACTERISTICS
6. TEST METHODS
7. MARKING
8. PACKAGING AND STORAGE
9. PRODUCT TYPE-APPROVAL
- APPENDIX 1
- APPENDIX 2
- APPENDIX 3
- APPENDIX 4

1. SUBJECT AND AREA OF APPLICATION

This specification defines the requirements which must be met by polyethylene (PE) pipes used to construct underground networks for natural gas distribution.

This specification is based on draft standard EN 1555-2, which states the options and defines supplementary requirements arising from specific provisions on safety and historic constraints relating to our networks.

Testing of the pipes is carried out in accordance with the applicable codes & Standards for “Polyethylene pipes for underground networks for natural gas distribution”.

2. REFERENCE STANDARDS AND SPECIFICATIONS

ISO 760: 1978	Determination of water - Karl Fisher method (General method)
ISO 4437: 1997	Buried polyethylene (PE) pipes for the supply of gaseous fuels- Metric series- Specifications
ISO 6259-3: 1997	Thermoplastics pipes - Determination of tensile properties-Part 3: Polyolefin pipes
ISO 3126: 1974	Plastic pipes- Measurement of dimensions
ISO 1183: 1987	Plastics - Methods for determining the density and relative density of non-cellular plastics
ISO/DIS 1183-3	Plastics - Methods for determining the density of non- cellular plastics - Part 3: Gas pyknometer method
ISO 2505-1: 1994	Thermoplastics pipes - Longitudinal reversion - Part 1: Determination methods
ISO 2505-2: 1994	Thermoplastics pipes - Longitudinal reversion - Part 2: Determination parameters
ISO 1167: 1996	Thermoplastics pipes for the conveyance of fluids- Resistance to internal pressure- Test method
EN 728:1997	Plastics piping and ducting systems - Polyolefin pipes and fittings - Determination of oxidation induction time.
EN 1056: 1996	Plastics piping and ducting systems - Plastics pipes and fillings - Method for exposure to direct (natural) weathering.
prEN 1555-1: 2001	Plastics piping systems for the supply of gaseous fuels- Polyethylene (PE)-Part 1: General.
prEN 1555-2: 2001	Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 2: Pipes.
EN ISO 12162: 1995	Thermoplastics materials for pipes and fittings for pressure applications- Classification and designation-Overall service (design) coefficient.

EN ISO 13479	Polyolefin pipes for the conveyance of fluids - Determination of resistance to crack propagation - Test method for slow crack growth on notched pipes (notch test).
ISO 4440-1: 1994	Thermoplastics pipes and fittings - Determination of melt mass-flow rate - Part 1: Test method.
ISO DIS 9080	Plastics piping and ducting systems - Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation.
ISO 13477: 1997	Thermoplastics pipes for the conveyance of fluids - Determination of resistance to rapid crack propagation (RCP) - Small-scale-steady-state test (S4 test).
IS 14885: 2001	Polyethylene pipes for the supply of Gaseous Fuels-Specifications.
11-0257-02-07-02-005	Polyethylene compounds for the manufacture of pipes and fittings for Underground natural gas distribution networks. Acceptance procedure.

3. DEFINITIONS

3.1. BATCH OF COMPOUND

By batch of compound is meant a homogeneous quantity of PE compound of the same origin and of a particular brand.

The batch must be registered under a single identification number (batch number) which leaves no doubt as to the origin, identity and date of manufacture of the compound.

3.2. BATCH OF PIPES

By batch of pipes is meant a homogenous lot of pipes with identical dimensions, made in a continuous process by the same extrusion machine and from the same batch of compound.

3.3. MINIMUM REQUIRED STRENGTH (MRS 10)

Standardised class of compounds for which the Lower Confidence Limit (LCL) is equal to 10.

3.4. PE 100

Standard designation for PE compounds in class MRS 10.

For such PE compounds, the long-term hydrostatic strength — calculated and classified according to the standardised method (ISO 9080 and ISO 12162) for a temperature of 20°C, a period of 50 years and a reliability of 97.5 % — must be at least 10 MPa.

3.5 LOWER CONFIDENCE LIMIT (LCL)

A quantity with the dimensions of stress, in Megapascal, which can be considered as a property of the material under consideration and represents the 97.5% lower confidence limit of the predicted long-term hydrostatic strength at a temperature of 20°C for 50 years with internal water pressure.

3.6 Standard Dimensions Ratio (SDR)

SDR is the quotient of the nominal outside diameter and the nominal wall thickness (expressed rounded to one decimal)

$$SDR = d_e / e_n$$

d_e = nominal diameter of pipe

e_n = nominal thickness of pipe in mm

3.7 Overall Service (Design) Co-efficient (C)

C is an overall co-efficient with a value greater than 1 which takes into consideration service condition as well as properties of the components of a piping system other than those represented in the lower confidence limit. For this specification the minimum of C is 2.0

3.8 Maximum Allowable Operating Pressure (MAOP)

The highest effective pressure of the gas in the pipeline system expressed in bar, which is allowed in continuous use. It takes into account the physical and the mechanical characteristics of the components of the piping system.'

It is given by the equation:

$$MAOP = (20 \times MRS) / (C \times (SDR - 1))$$

4. MATERIAL SPECIFICATION

The PE compounds that are acceptable shall conform to the requirements for PE 100 described in prEN1555-1.

In order to be approved, materials shall conform with the CUGL technical specification 11-0257-02-07-02-005 "Polyethylene compounds for manufacture of pipes and fittings for underground networks for natural gas distribution - Acceptance procedure."

Approved materials are listed in Appendix 1.

Characteristics of PE Compound are given in Appendix 3.

Following are forbidden:

- a. use of recycled materials;
- b. mixture of different materials;
- c. addition of complementary materials by the pipe manufacturer.

5. CHARACTERISTICS

5.1. RAW MATERIAL

All the characteristics of the PE Compound are in accordance with the provisions of prEN 1555-1 or IS 14855 and ISO 4437 for PE 100 materials and for the limit values listed in the table in Appendix 3.

5.2. PIPES

5.2.1. Physical characteristics

5.2.1.1. Appearance of pipes

The appearance of the pipes is checked in accordance with 6.1.

The pipes must be square cut with smooth trimmed ends.

The internal and external surfaces of the pipes, examined visually without magnification, are uniform and smooth.

The pipes are free of scratches, pits, voids, blisters, occlusions or cracks.

5.2.1.2. Colour

The pipes shall be orange in accordance with the local requirements.

5.2.1.3. Density

Density is measured in accordance with the provisions of § 6.2. The measured value must correspond to the data listed in the table in Appendix 3, allowing for possible differences caused by measuring on the pipe instead of granulate.

5.2.1.4. Melt mass-flow rate (MFR)

The melt mass-flow rate MFR (190°C - 5 kg), measured on a sample taken from the pipe in accordance with 6.3., is within the limits stated in the table in Appendix 3: characteristics of PE Compound.

In addition, the discrepancy in absolute value between the MFR measured on a pipe sample and that measured on a sample of raw material may not exceed 20% of the latter.

5.2.1.5. Volatile content

The volatile content, measured on a pipe sample in accordance with Clause 6.4., may not exceed 350 mg/kg.

5.2.1.6. Water content

The water content may be estimated by measuring the volatile content.

If the volatile content, measured in accordance with 6.4., is more than 250 mg/kg, the water content must be ascertained.

The water content, measured in accordance with 6.5., must be 250 mg/kg or less.

5.2.1.7. Thermal stability (OIT)

Thermal stability is measured in accordance with § 6.6 on samples taken from the wall at random.

The minimum oxidation induction time at 210°C is 20 minutes. The maximum admissible decrease in the oxidation induction time measured on a pipe sample compared to that measured on the raw material, may not exceed 20% of the latter.

5.2.1.8. Resistance to atmospheric influence

Resistance to atmospheric influence is tested in accordance with § 6.7. The exposure dose corresponds to a total energy of at least 3.5 GJ/m².

After testing, the pipe sample must meet the specifications laid down in § 5.2.1.7 (thermal stability), 5.2.2.2 (resistance to internal hydraulic pressure) and 5.2.2.5 (stress at yield point and elongation to fracture). In the latter test, only elongation to fracture is taken into consideration.

5.2.2. Mechanical characteristics -

5.2.2.1. Internal stresses

Internal stresses are measured in accordance with § 6.8. The variation in length between the reference points must be 3% or less.

5.2.2.2. Resistance to internal hydraulic pressure

The tests are carried out in accordance with §6.9. The test specimens taken from a batch of pipes show no leakage in the conditions of temperature, wall stress and test length stated in the tables in Appendix 4: resistance to internal hydraulic pressure.

If, for a given material, during the test at 80°C - 165 hrs with the highest wall stress σ , fracture occurs before the specified time and is ductile in nature, the tests are repeated with a minimum time of 1,000 hrs and the corresponding wall stress level as specified in Appendix 4.

5.2.2.3. Resistance to slow cracking (Notch test)

The test is carried out on pipes with a nominal diameter ≥ 90 using the test method stated at 6.10. No fracture will occur on the samples for test periods of less than 500 hrs.

5.2.2.4. Resistance to growth of cleavage fractures

Pipes with a diameter ≥ 90 are tested in accordance with the test described at § 6.11. The critical pressure at 0°C is at least 3 bar.

5.2.2.5. Stress at yield point and elongation to fracture

The test is carried out as described at Cl 6.12.

The minimum stress at the yield point is defined in the table “Characteristics of PE Compound” (Appendix 3).

Elongation to fracture must be more than 350% for each test specimen.

5.2.3 Dimensional characteristics

The dimensions are measured in accordance with 6.13.

5.2.3.1. Series

The pipes belong to either series SDR 11 or 17.6 in table A

below: TABLE A

Nominal Diameter de	Thickness en (mm)	
	SDR 11	
20	3.0	
32	3.0	
63	5.8	
90	8.2	
125	11.4	

5.2.3.2. Length

The length of the pipes is specified in the order. The preferred lengths are defined in

§8.2. The tolerances for straight pipes are: - 0 / + 0.05 m

The tolerances for rolled pipes are: - 0 / + 0.50 m

5.2.3.3. Mean external diameter Dm

The extreme mean external diameters are stated in IS 4437.

5.2.3.4. External diameter D - ovalisation

The maximum deviation permitted in relation to nominal diameter de is given IS 4437.

In the event of dispute regarding the dimensions of rolled pipes, the dimensions shall be reviewed 24 hours after the pipe has been unrolled.

5.2.3.5. Thickness

The thicknesses are given in table A and have been taken from ISO 4437.

5.2.4 Reversion Test

When tested as per Clause 6.14, the value of longitudinal reversion shall not be greater than 3%.

5.2.5 Tensile Test

When tested in accordance with Cl. 6.15 at $23 \pm 1^{\circ}\text{C}$ at a speed of 100 mm/min \pm 10% for specimen thickness below 5 mm and at a speed of 25 mm/min for thickness above 5mm, the value obtained shall be as follows:

Tensile yield strength	15 MPa, Min
Elongation at Break	350 %, Min

5.2.6 Squeeze off

On all sizes of pipe up to and including 400 mm diameter, strength after squeeze-off and subsequent rerounding, must be demonstrated by testing as per Cl. 6.16.

5.2.7 Pigment Dispersion

When tested as per Annex E of IS 14885, the grading should be ≤ 3 .

6.0 TEST METHODS

6.1. APPEARANCE

The pipes are presented on suitable work surfaces and examined visually.
A suitable artificial lighting system is used to examine their internal appearance.

6.2. DENSITY

The density is tested using the method described in ISO 1183, with the result expressed in kg/m^3 .

6.3. MELT MASS-FLOW RATE (MFR)

The melt mass-flow rate shall be ascertained in accordance with standard ISO 4440-1 or IS-14885.

6.4. DETERMINATION OF VOLATILE CONTENT

The volatile content is checked using the method described in ISO 4437/IS 14885.

6.5. DETERMINATION OF WATER CONTENT USING KARL FISCHER METHOD

The water content is measured using the Karl Fischer method described ISO 760.

6.6. THERMAL STABILITY (OIT)

The test is carried out in accordance with the minimum oxidation induction time (OIT) of the material from the product shall be ≥ 20 min when tested as per Annex. D of IS 14885.

6.7. RESISTANCE TO ATMOSPHERIC INFLUENCE

Resistance to atmospheric influence is tested in accordance with the specifications of standard EN 1056.

Artificial exposure is also acceptable, provided it can be proved that the test is equivalent to the natural exposure test.

6.8. INTERNAL STRESSES

Internal stresses are measured using the methods described in ISO 2505.

The test temperature is $110 \pm 2^\circ\text{C}$.

Table B states the time depending on the thickness of the pipe and the method used.

Wall Thickness m	Table B Time in minutes	
	Bath	Stove
$e < 8$	15	60
$8 \leq e < 16$	30	120
$16 \leq e$	60	240

6.9. RESISTANCE TO INTERNAL HYDRAULIC PRESSURE The

test method is that described in ISO 1167.

The test pressure is calculated using the following formula, based on the nominal diameters and thicknesses.

$$P = 10 \cdot \sigma(2 \cdot e_n) / (d_e - e_n)$$

where

σ = pipe wall stress in MPa

d_e = nominal diameter of pipe

e_n = nominal thickness of pipe in mm p =

test pressure in bar

In the event of dispute, the test pressure shall be calculated on the basis of the diameters and thicknesses measured.

The test specimens taken from a batch of pipes show no leakage in the conditions of temperature, wall stress and test length stated in the tables in Appendix 4: resistance to internal hydraulic pressure.

Fractures at 80°C must be of the cleavage type. The minimum fracture time is defined by the straight line at 80°C connecting the points specified in the tables in Appendix 4.

If the pressure and/or temperature limits specified are exceeded, this is noted in the report stating the reason and scale (times and limit values).

If during the minimum specified time the pressure and/or temperature have exceeded the upper limits determined by the standard, the test is taken into consideration if the cracking time is higher than the specified minimum. Otherwise, the test must be repeated.

On the other hand, the test must be repeated if the pressure and/or temperature fall below the lower limits.

6.10. RESISTANCE TO SLOW CRACKING (NOTCH TEST)

The test is carried out in accordance with EN ISO 13479 at 80°C on a notched pipe with a wall stress of 4.6 MPa.

6.11. RESISTANCE TO GROWTH OF CLEAVAGE FRACTURES

Resistance to the growth of cracks is tested using test S4 described in standard ISO 13477. The test temperature is 0°C and the knife speed 20 m/sec.

6.12. STRESS AT YIELD POINT AND ELONGATION TO

FRACTURE The test is carried out in accordance with ISO 6529-3

In the case of pipes with coextruded yellow lines, all test specimens must be taken such that the yellow marking axis coincides with the longitudinal axis of the test specimen.

For thicknesses of less than 12 mm, the test specimens shall be cut using a hollow punch.

The traction speed is 100 mm/min.

6.13. DIMENSIONS

All dimensions, except for lengths, are measured at a temperature of $23 \pm 2^\circ\text{C}$ using the methods described in ISO 3126.

6.14 Reversion Test

Shall be tested in according to the procedure given in Annex. C of IS 14885

6.15 Tensile Test

Shall be tested according to the procedure given in Annexure J of IS 14885.

6.16 Squeeze off

Shall be tested in accordance with Annexure G of IS 14885.

7. MARKING

The marking is repeated at least once per metre. This marking is done on two diametrically opposite generating lines. The empty space between two technical data is filled by alternate repetition of the word "GAS".

Marking must be indelible and visible in colour.

The stamping must not affect the quality of the pipe.

The minimum height of the characters must be:

- 3 mm for nominal diameters ≤ 63
- 5 mm for nominal diameters ≥ 110 .

The depth of the marking must be ≤ 0.1 mm in the case of pipes with a nominal diameter ≤ 110 and ≤ 0.2 mm in the case of pipes with larger diameters.

Marking of the pipes shall include, in the following order, on each generating line:

- the word “GAS”;
- the nominal diameter and the thickness of the wall;
- the SDR series;
- the date of manufacture (year, month, day);
- the work team in Roman numerals;
- the commercial name or code of the resin used (see Appendix 2);
- the code of the extrusion machine;
- the name or style of the manufacturer.

Any other marking, either in terms of the application technique or the data specified, must be submitted to the Company for approval in advance.

8. PACKAGING AND STORAGE

8.1. GENERAL

The manufacturer shall take all necessary action to prevent the pipes from deteriorating during storage, loading and transport.

The pipes may be supplied in straight lengths or in rolls. Straight lengths are normally placed in crates.

The pipes are fitted with sealing devices at both ends, of a model approved by the Company.

8.2. LENGTHS

The preferred pipe lengths are given in table C below.

Nominal diameter r de	TABLE C Preferred Length in meters		
	Reels		Straight pipes
20	200		-
32	200		-
63	100		-
125	50		-

The lengths to be supplied are specified in the order.

The lengths to be supplied are specified in the SOR order.

8.3. PACKAGING

8.3.1. Packaging of straight pipes

The wooden framework is banded using galvanized steel hoops. The tension of the hoops is such that the pieces of wood forming the framework are in contact with one another and the overlap of the crosspieces on the uprights is $\frac{2}{3}$ the thickness of the latter.

8.3.2. Packaging of rolled pipes

Each roll includes an adequate number of hoops made from cords or bands of synthetic material, evenly distributed around the whole circumference of the bundle. In each case there must be a hoop less than 0.3 m from each end of the pipes.

The packaging must on no account adulterate the pipe.

8.4. HANDLING AND STORAGE

Immediately after production, pipes shall be handled with great care from the production line to the storage place, in order to avoid any damage such as scratches, notches, superficial wear and tear, holes, dented walls or similar.

If handled by forklift or similar equipment, the metallic forks shall be covered with a soft material in order to avoid any damage to the pipes.

The extremities of the pipes shall not be in contact with the floor while handling.

Indoor storage is preferred.

Outdoor storage is permitted at the following conditions:

- Storage periods are not exceeding one month
- Pipes are protected from direct sunlight by a suitable shelter
- Pipes are stored on a hard storage surface clean from excessive dust, stones, water etc.
- Pipes are not in contact with the soil, but are supported by soft material such a wood etc.
- Pipes are protected from damages caused by traffic of forklifts, trucks etc.

8.5 SEALS

Prior to execution of the order, the manufacturer must submit to the Company the seals which it intends to use for all the types of pipes ordered.

The seals shall preferably be made of PE or a material which does not adulterate polyethylene. Metal and PVC seals are not permitted. The seals must be able to withstand storage times as guaranteed in § 8.6. of this specification, and also to withstand handling during installation.

They must not be brittle or sharp and the materials, shapes and dimensions thereof must be such that they cannot fully penetrate inside the pipes.

They are of the internal plug type for all pipes supplied in straight lengths, and for pipes rolled in coils or on reels, the seals may be caps.

All seals are fitted with a valve to prevent pressurization or depressurizations of the pipes, depending on climatologically temperature cycles.

In theory, they are placed on the pipes immediately after completion of the manufacturing tests, but before storage of the pipes. In the event of acceptance, the pipe plugs are removed and replaced by the supplier.

The seals cannot be recycled after the pipes have been installed. Their removal on site should not require the use of special tools.

8.5. STORAGE WARRANTY

It must be possible to store the pipes in the open air, protected from direct sunlight, without taking any other special precautions for at least two years from the date of manufacture stated on the pipe.

The storage warranty covers continued conformity of the dimensions, characteristics and performances laid down in this specification.

8.6. DEADLINE FOR SUPPLY

The pipes must be supplied to the user within one month following the date of manufacture.

9. **PRODUCT TYPE-APPROVAL**

For the purposes of type-approval of the product, the manufacturer is obliged to supply a technical file as defined in tender.

Type-approval of the products is carried out in accordance with the aforementioned procedure.

Any change to the type-approved product, process or manufacturing equipment must be notified to the Company in writing.

Any failure in this respect shall incur withdrawal of type-approval until termination of the contract.

APPENDIX

1

Approved materials

The materials which have passed the “CUGL” approval procedure for PE materials are approved for manufacture of the pipes.

For information, the following materials have been approved to

date: Solvay Eltex TUB 121 (black)	PE 100
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or Eltex TUB 125 (orange)

Borealis HE 2490	PE 100
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Fina Finathene XS 10 B	PE 100
------------------------	--------

Dow BG 10050	PE 100
--------------	--------

Elenac Hostalen CRP 100	PE 100
-------------------------	--------

APPENDIX

2

Code for different raw
materials

Manufacturer	Commercial brand name		Code (*)
SOLVAY	ELTEX	TUB 121/125	E3
BOREALIS		HE 2490	N3
FINA	FINATHENE	XS 10 B	F3
DOW		BG10050	D1
ELENAC	HOSTALEN	CRP100	H7

*Based on the GERG List

APPENDIX- 3

Characteristics of PE Compound

Characteristics	Units	Requirements	Test Parameters	Test Method
Conventional density	kg/m ³	>=928.4(base Polymer) 7328:1992 ¹⁾ >=928.4(base Polymer)	23 ⁰ C 27 ⁰ C	IS
Melt flow rate	g/10 min	+/- 20 % of value nominated by compound producer	190 ⁰ C /5.0 Kg	IS 2530:1963
Thermal Stability	min	>= 20	200 ⁰ C	Annex D of IS 14855
Resistance to gas	h	>= 20	80 ⁰ C	Clause 5.5
Constituents				
Pigment Dispersion	Grade	<= 3		Annex E of IS 14855

NOTE — Indian testing methods mentioned in IS 7328 and IS 2530 for the determination of conventional density and mass flow rate have been found co-related with ISO/British Standard Testing methods, such as ISO 1183-1983(E), ISO 1133-1991(E), ISO 6964 and BS 2782 Part 8, method 823-A, 823-B, 1978 respectively. The compound shall confirm to the weathering requirements for thermal stability as above, hydrostatic strength HS (165 h-80°C) at induced stress 4.6 MPa and 5.5 MPa for PE-80 and PE-100 material respectively and elongation at break 350 percent minimum after exposure of the test as per Annex F.

APPENDIX 4

Resistance to internal hydraulic pressure

Specification of test parameters

PE 100 materials (MRS10)

Test type	Minimum Time hours	Type of fracture
20 ⁰ C- $\sigma \geq 12.4$ MPa	100	ductile
40 ⁰ C- $\sigma \geq 5.5$ MPa	165	cleavage
80 ⁰ C- $\sigma \geq 5.0$ MPa	1000	-

If a ductile fracture occurs during the test at 80°C - 165 hrs, the test is repeated for 1,000 hrs at a lower stress level.

Polyethylene pipes for underground networks for natural gas distribution

Technical Datasheet

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1.0 REFERENCE DOCUMENT

1.0 REFERENCE AND STANDARD DOCUMENTS

11-0257-02-07-02-001	Polyethylene pipes for underground networks for natural gas distribution - General requirements.
11-0257-02-07-02-003	Polyethylene pipes for underground networks for natural gas distribution -Quality control of pipes.
11-0257-02-07-02-007	Supplementary procedure for type-approval of polyethylene pipes for underground networks for natural gas distribution.
IS 14885 Specification	Polyethylene Pipes for the Supply of Gaseous Fuels-

Dn	en	SDR	Coil Length in	Total Length Km	Approved Material	Weight/m (Kg/m)
20	3	11	200		E3-N3-F3-D1-H3	0.162
32	3	11	200		E3-N3-F3-D1-H3	0.28
63	5.8	11	100		E3-N3-F3-D1-H3	1.05
90	8.2	11	100		E3-N3-F3-D1-H3	
125	11.4	11	50		E3-N3-F3-D1-H3	4.1

(*) approximative value according to DIN 8074

Manufacturer	Commercial brand name	Code (*)
SOLVAY	ELTEX TUB 121/125	E3
BOREALIS	HE 2490	N3
FINA	FINATHENE XS10B	F3
DOW	BG1005O	DI

ELENAC

HOSTALEN

CRP 100

H7

**POLYETHYLENE PIPES FOR UNDERGROUND NETWORKS FOR NATURAL GAS
DISTRIBUTION QUALITY CONTROL OF PIPES**

TABLE OF CONTENTS

1. SUBJECT AND AREA OF APPLICATION
2. REFERENCE AND STANDARD DOCUMENTS
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4. TESTS

APPENDIX 1 – TABLES OF SAMPLES

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APPENDIX 3- FACTORY CERTIFICATE

APPENDIX 4- STOCK LIST

APPENDIX 5- ASSESSMENT OF APPEARANCE DEFECTS ON INTERNAL AND
EXTERNAL SURFACES OF POLYETHYLENE PIPES FOR UNDERGROUND

- 1 PREAMBLE
2. DESCRIPTION OF MAIN APPEARANCE DEFECTS
3. ASSESSMENT CRITERIA
4. ACCEPTANCE CRITERIA FOR BATCHES

1. SUBJECT AND AREA OF APPLICATION

The purpose of this document is to define the test requirements to be met by PE pipes in accordance with the latest version of the CUGL specification listed on reference documents 11-0257-02-07-02-001, -002, -007

2. REFERENCE AND STANDARD DOCUMENTS

11-0257-02-07-02-001 Polyethylene pipes for underground networks for natural gas distribution

- General requirements.

11-0257-02-07-02-002 Polyethylene pipes for underground networks for natural gas distribution

-Technical data sheet.

11-0257-02-07-02-007 Supplementary procedure for type-approval of polyethylene pipes for underground networks for natural gas distribution.

IS 14885 Polyethylene Pipes for the Supply of Gaseous Fuels-Specification

3. GENERAL PRINCIPLES

3.1. MANUFACTURER'S RESPONSIBILITY

The manufacturer is totally responsible for the quality of the pipes which he manufactures. Acceptance Test procedures do not absolve him from this responsibility.

In order to ensure that the pipes comply with the specification in every case, tie pipes are tested by the factory control department, which is separate from its production department.

The pipes supplied are guaranteed for one year after commissioning or three years maximum after the date of manufacture.

3.2. QUALITY ASSURANCE

The manufacturer must have a quality assurance system in place as described in standard EN 29001 or EN 29002. The quality manual must be supplied to the Owner/ owner representative Quality Control Department.

The quality assurance system shall be certified by an accredited body.

3.3. SPECIMEN SAMPLE OF GRANULATE

The manufacturer shall supply the Owner/ owner representative Quality Control Department with a kilo of granulate from each batch of material used to manufacture the pipes.

The specimen sample is taken in the presence of the Owner/ owner representative Quality Control Department official if testing takes place during manufacture. A suitable container

shall be supplied to the manufacturer by Owner.

All necessary precautions shall be taken to prevent contamination and deterioration of the granulate during sampling and during subsequent handling of the sample.

4. TESTS

4.1. TESTS CARRIED OUT BY THE MANUFACTURER

4.1.1. General

It is essential to comply with the provisions in the following sections to ensure that the pipes conform to the specification in every case.

All the pipes are individually numbered. This marking is done using an inert product which will not adulterate the quality of the pipes (e.g. lithographic chalk). The pipe number consists of a maximum of three digits. In the case of pipes with a diameter of 90 mm or more, the number is marked on the inside. For rolled pipes and pipes on drums, it is applied on an adjoining label and the marking must not be subject to deterioration.

4.1.2. Individual tests

4.1.2.1. Appearance

The external and internal appearance of each pipe is checked in accordance with the document, "Assessment of appearance defects on the internal and external surfaces of polyethylene pipes for underground networks for natural gas distribution" (see Appendix 5). A suitable artificial lighting system is used to check the internal appearance.

4.1.2.2. Dimensions

The thickness and average diameter (see Appendix 2), measured in the conditions defined in the specification, are entered in an inspection document which includes the dates of manufacture and the production team, extruder number, code of the material used, pipe number and, if a pipe is declared invalid, the reason for the rejection.

When the manufacturer carries out continuous measurement of the thickness, the record of the values measured shall include all the details necessary for marking of the pipes.

The, inspection documents and any records shall be supplied to the Owner/ owner representative official.

4.1.3. Each batch of material

The pipe manufacturer shall ask the raw material manufacturer for a certificate showing:

- melt mass-flow rate;
- water content;
- density;

- carbon black content;
- carbon black quality;
- thermal stability.

The pipe manufacturer shall carry out the following checks and tests on each batch of material:

- melt mass-flow rate on resin before use;
- volatile and water content;
- thermal stability of the resin.

These checks and tests shall be carried out in the conditions laid down in technical specification. The results are entered in documents showing full identification of the batch of pipe, to be supplied to the Owner/ owner representative official.

4.1.4. Each batch of pipes

For each batch of pipes, the manufacturer shall carry out the following checks and tests in addition to the above-mentioned individual tests:

- ovalisation;
- length;
- melt mass-flow rate on pipe;
- thermal stability of pipe;
- internal stresses;
- resistance to internal hydraulic pressure at 20°C and 80°C;
- determination of traction characteristics of pipes; tension at yield point at 23°C and elongation to fracture at 23°C;
- end-to-end weldability for pipes with diameters of 110 mm or more.

These checks and tests are carried out in the conditions defined in technical specification

The results are entered in documents showing full identification of the batch of pipes and supplied to Owner/ owner representative.

4.1.5. Type-approval of pipes

When a new material aid/or a new extruder is used, the manufacturer must have the product type- approved in accordance with the standard.

4.1.6. Special tests

- Resistance to atmospheric influence.

- Resistance to growth of cleavage fractures.
- Resistance to slow cracking (notch test).

If necessary, these tests shall be carried out by mutual agreement in an independent laboratory.

4.2 FACTORY ACCEPTANCE BY OWNER/ OWNER REPRESENTATIVE QUALITY CONTROL DEPARTMENT OFFICIAL

4.2.1. General

Acceptance tests are carried out in the presence of an official from the Owner/ owner representative Quality Control Department.

All checks and tests are carried out in the conditions laid down in technical specification . The results must be in accordance with the provisions specified therein and with the individual specifications of the order.

On each visit, the manufacturer provides the Owner/Owner's representative free of charge with the facilities and personnel necessary to carry out the tests laid down in the specification. In addition, during execution of the order, the Owner/Owner's representative has access to the storage installations for the raw materials before manufacture, the manufacturing and testing installations and the storage areas for the pipes for which Owner/Owner's representative is responsible for testing.

On arrival at the factory for his inspection, Owner/Owner's representative receives a certificate for each batch of pipes presented for acceptance. This document shall be consistent with the specimen in Appendix 3.

In addition, when acceptance relates to part of an order, the supplier must provide the Owner/Owner's representative with a stock list and a history of the stock of pipes. A specimen of this form is attached to this document: Appendix 4.

Whenever so requested by the Owner/Owner's representative, the manufacturer must be able to provide him with recent test and calibration reports for the measuring instruments and test installations.

4.2.2. Convening notice for acceptance

The acceptance convening procedures are specified in the order.

4.2.3. Acceptance tests

4.3.2.1. Appearance, dimensions and marking

The number of pipes examined is at least 10 % of the pipes presented for acceptance. The pipes to be examined are placed on work trestles or grids for ease of testing. Rolled pipes are presented on reels.

4.2.3.2. Checking of characteristics

For each batch of pipes as defined in technical specification or a constituent part thereof, the minimum samples to be taken are stated in the table in Apndx 1.

4.3 ACCEPTANCE AND REJECTION

4.3.1. Appearance, dimensions and marking

Any failure means that the batch is rejected. It may however be presented again after sorting, with the agreement of the Owner/Owner's Representative.

4.3.2 Checking of characteristics

Any result which is not in accordance with the provisions of the specification and the individual specifications of the order shall give rise to a repeat test on at least double the number of samples. If the unfavorable result is confirmed, the batch is definitively rejected. If the unfavorable result is invalidated, the batch is accepted.

By way of additional investigation, other analyses or examinations may be carried out by mutual agreement, at the manufacturer's expense.

4.4 DISPATCH WITHOUT ACCEPTANCE

If Owner/Owner's representative decide to waive the acceptance procedures, it reserves the right to ask the manufacturer to carry out the acceptance tests and checks laid down in 4.2.3.

The supplier is obliged to send the Owner/Owner's representative a factory certificate, the stock lists and the acceptance test and check report if these have been requested.

These documents shall contain the order references.

Failure to observe the above procedures shall be sanctioned by refusal to take delivery.

APPENDIX 1 – TABLES OF SAMPLES

Test	Quality criterion as per specifications G001-1	Test method As per Specifications G001-1	No of samples per batch	Number of test specimens
------	--	--	-------------------------	--------------------------

Internal stresses	§ 5.2.2.1	§ 6.8	2	3 from the same pipe	
Determination of traction characteristics	§ 5.2.2.5	§ 6.12	2	3 from the same pipe	
Melt mass flow rate	§ 5.2.1.4	§ 6.3	2	1 from Same pipe	
Resistance to internal hydraulic Pressure -at 20 ⁰ C -at 80 ⁰ C	§ 5.2.2.2	§ 6.9	1 1	2 test specimen(+ 2 reserves)(1) 1 test specimen per pipe 2 test specimen(+ 2 reserves)(1) 1 test specimen	
Weldability Traction on welded pipe Resistance to internal hydraulic pressure -at 20 ⁰ C -at 80 ⁰ C	§ 5.2.2.6 § 5.2.2.2	§ 6.13 § 6.9	2(4) 1 1 1	2 section of different pipe welded end to end 1 welded sample(3) See note	
Resistance to slow cracking of notched pipe (Notch test)	§ 5.2.2.3.	§ 6.10	4(3)	See note (5)	

Resistance to growth of cleavage fractures	§ 5.2.2.4.	§ 6.11	4(3)	See note (5)	
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Thermal stability of PE	§ 5.2.1.7.	§ 6.6	1(3)	See note (5)	
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Notes

- (1) Number of test specimens to be tested: 1 specimen at start of manufacture and 1 specimen at end of manufacture per shift basis.
- (2) In agreement with the Owner official, these tests on welded test specimens may be included in the series of tests designed to check resistance to internal hydraulic pressure.
- (3) Performance of this test is left to the discretion of the Owner/Owner's Representative.
- (4) The number of welded samples per batch may be increased to three if the Owner official has decided to carry out the traction test on the welded sample.
- (5) The taking of samples is left to the discretion of the Owner official, if the manufacturer is not equipped to carry out these tests properly, they shall be carried out at the manufacturer's expense in a reputed laboratory chosen by Owner.

APPENDIX 2- DIMENSIONAL REQUIREMENTS

The pipes belong to either series SDR 11 or SDR 17.6 defined

below: THICKNESS

Nominal Diameter de	SDR 11			SDR17.		
	en	emin in mm	emax in mm	en	emin in mm	emax in mm
20	3	3	3.4	-	-	-
32	3	3	3.4	-	-	-
63	5.8	5.8	6.5	-	-	-
90	8.2	8.2	9.2			
125	11.4	11.4	12.7	7.1	7.1	8.0

MEAN EXTERNAL DIMENSIONS

Nominal Diameter de	MEAN EXTERNAL DIAMETER dm	
	dm min. in mm	dm max in mm
20	20	
32	32	32.3
63	63	63.4
90	90	
125	125	

APPENDIX 3 - FACTORY CERTIFICATE

PE pipes for underground gas networks		FACTORY CERTIFICATE n°	
Supplier:		Order :	
Dimensions:		SDR Series:	
Material:		Batch no:	Date of manufacture:
MRS:			
1. TEST ON MATERIAL			
1.1 MFI :		g/10 min	
1.2 Volatile content :		mg/kg	
1.3 Thermal stability :		min	
2. PRODUCTION TEST ON EXTRUDED PIPES			
2.1 Dimensions	d _m min:	d min:	e _m min:
	d _m max:	d max:	e _m max:
2.2 Surface appearance		Checked:	
Smooth pipes free of cavities, pitting, scratches or other defects:			
2.3 Traction:			
Elongation to fracture:			
2.4 Internal stresses:			
2.5 Weldability:			
2.6 Hydraulic tests:	80 °C - σ: N/mm²:	20 °C - σ: N/mm²:	hr
		hr	
2.7 MFI:	g/10 min		
2.8 Thermal stability:	min		
2.9 Volatile content::	mg/kg		
3. Marking of pipes			
4.	Packing	Number	Unit length
	Crates		
	Rolls		
	Drums		
Date		Factory stamp	Signature

APPENDIX 4 - STOCK LIST

Stock list	PE pipes for natural gas distribution networks STS G001-3										Sheet n°	
Order n°	Acceptance/Authorisation (1) dated:										Material:	
	Ø = 32			Ø = 40			Ø = 63			R = Rolls L = Straight length		
	R 50 m	L 6 m		R 50 m	L 6 m		R 50 m	L 6 m				
	SDR 11			SDR 11			SDR 11					
A	Stock available after acceptance n° dated											
B	Deliveries										Call no.	Destination
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
C												
	Presented for acceptance											
D	Accepted											
E	Stock after acceptance (C + D)											
F	Balance on calls recorded										Call no.	Destination
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
G	Available (E - Σ F)										Comments:	
H	Stock not accepted											
I	in production											
	Stock still available to cover 1 month's consumption (G + H + I)											
Date:				Factory stamp								
Name:												
Signature:												

(1) delete as applicable

Stock list		PE pipes for natural gas distribution networks- STS G001-3				Sheet n°	
Order n°			Acceptance/Authorisation (1) dated:			Material:	
m	Ø = 110		Ø = 160	Ø = 200	Ø =	R = Rolls L = Straight length	
	R450	L14	L14	L14			
SDR	17,6	17,6	17,6	17,6			
A	Stock available after acceptance n° dated						
B	Deliveries					Call no.	Destination
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
C	Available before acceptance (A - Σ B)						
	Presented for acceptance						
D	Accepted						
E	Stock after acceptance (C + D)						

F	Balance on calls recorded					Call no.	Destination
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
G	Available (E - Σ F)					Comments:	
H	Stock not accepted						
I	In production						
	Stock still available to cover 1 month's consumption (G + H + I)						
Date:			Factory stamp				
Name:							
Signature:							

(1) Delete as applicable

APPENDIX 5- ASSESSMENT OF APPEARANCE DEFECTS ON INTERNAL AND EXTERNAL SURFACES OF POLYETHYLENE PIPES FOR UNDERGROUND NETWORKS FOR NATURAL GAS DISTRIBUTION

1 PREAMBLE

The internal and external surfaces of the tubes are examined visually with the naked eye, without magnification and under adequate lighting.

2. DESCRIPTION OF MAIN APPEARANCE DEFECTS

2.1. DEFECTS CAUSED BY HANDLING OR STORAGE

2.1.1. Incrustation with foreign matter

Pebbles, sand, glass, filings, wood splinters, etc..

2.1.2 Scratches

Narrow continuous lesions.

2.1.3 Notches

Incisions made by a sharp instrument.

2.1.4 Superficial wear and tear

Surface deterioration resulting from friction against foreign matter.

2.1.5 Holes

Holes in the wall caused by forceful insertion of a generally pointed object (e.g.: nails, probes, screws, etc.).

2.1.6 Dented walls

Permanent distortion of the wall accidentally caused during handling.

2.2 MANUFACTURING DEFECTS¹

2.2.1. Continuous longitudinal internal lines

Longitudinal marks evenly distributed around the inner circumference of the pipe, caused by fusion of material faces on exit from the extrusion tool. These marks are caused by an incorrect choice of transformation parameters.

2.2.2. Continuous longitudinal lines inside and outside

These do not exceed 0.20 mm in depth.

- They may be caused by the defective condition of the calibrators or the sealing device for the calibration system, in which case they are isolated instances.
- They may be caused by friction of residual deposits attached to parts of the extrusion tool, the calibrators or the sealing plug of the calibration system. In this case, they are generally randomly distributed. These deposits may consist of waxes, oxidised polyethylene or other products which are released during transformation of the material in the extruder or which are present in the cooling water.

2.2.3. Incrustation with residual matter generated during extrusion

The deposits defined in 2.2.2. work loose and are crushed in the external wall of the pipes while passing into the calibrator, or adhere to the internal wall of the pipes.

2.2.4. Presence of foreign matter in the polyethylene resulting from contamination of the raw material .

This contamination may be caused by all sorts of liquid or solid products (oil, paper, cardboard, plastics, glass, sand, dust, etc.).

2.2.5. Excessive water and volatile contents

2.2.5.1. Porosity

Defects generally caused by volatile matter which occur specifically when the water and volatile contents are too high.

¹The term extrusion defect covers all defects resulting from the complete pipe manufacturing process.

2.2.5.2. Craters (surface spalling)

Shallow or deep conical cavities the cause of which is difficult to establish, generally the result of water and volatile contents being too high.

2.2.6 Pitting

Defects in the shape of aligned dots, either in clusters or dispersed, which are often connected with carbon black anomalies.

2.2.7 Unfused parts

Molecular polyethylene elements which are totally or partially unfused and located both on the surface and right inside the thickness of the pipe wall.

2.2.8 Cavities

Superficial denting of the external wall, sometimes replicated on the internal wall.

This is the result of distortion caused by a drop of water between the pipe and the calibrator at the intake. The water comes from the calibrator cooling system and is a common phenomenon if the pressure of the calibrator cooling water is too high.

2.3. DEFECTS CAUSED BY MARKING

2.3.1 Marking too deep

This is caused by incorrect setting of the stamps or the stamp design.

2.3.2 Indentations caused by the tool holding the marking stamps

These are the result of incorrect settings or wear and tear.

3. ASSESSMENT CRITERIA

3.1. CRITICAL DEFECTS

The following defects are critical:

- Continuous longitudinal internal lines (see § 2.2.1.)
- Presence of foreign matter in the polyethylene resulting from contamination of the raw material (see §2.2.4.)
- Porosity (see § 2.2.5.1.)

3.2 OTHER DEFECTS

Defects caused by handling or storage

Pipes presenting one of the following defects are classified as defective:

- Incrustation with foreign matter (see § 2.1.1.).
- Scratches (see § 2.1.2.), the depth of which is more than 10% of the thickness, with a limit of 0.5 mm.
- Superficial wear and tear (see § 2.1.4.), where the depth of the marks is more than 10% of the thickness, with a limit of 0.5 mm.
- Notches (see § 2.1.3.), the depth of which is more than 10% of the thickness, with a limit of 0.50 mm.
- Holes, the depth of which (see § 2.1.5.) is more than 10% of the thickness, with a limit of 0.50 mm
- Dents in the pipe wall (see § 2.1.6.).

3.2.2 Manufacturing defects

3.2.2.1 Incrustation with residual matter generated during extrusion, craters, pits, unfused elements (see § 2.2.3., 2.2.5.2., 2.2.6. and 2.2.7.)

A sample may present several of the above defects.

Let p be the depth of the defect and e the nominal thickness of the pipe. Case 1 : $p > 0.1.e$

Any pipe which includes one of the above defects where the depth is more than 10% of the nominal thickness of the pipe is always considered to be defective.

Case 2 : $p \leq 0.1.e$

For a pipe which contains isolated defects², the depth of which is 10% of the nominal thickness or less, each defect is allocated a grade g depending on its largest dimension a , excluding the depth. The value of g in terms of a is defined in Table 1.

Table 1

Largest dimension a of defects in	Grade
$1.0 \leq a < 2.0$	5
$2.0 \leq a < 3.0$	10
$3.0 \leq a < 4.0$	25
$4.0 \leq a < 5.0$	50
$5.0 \leq a < 6.0$	51

Defects, the largest dimension of which is less than 1mm are not taken into account.

A pipe is considered to be defective when it presents a defect, the largest dimension of which is 6.0 mm or more.

A pipe is considered to be defective when the sum of the products of the grades g multiplied by the number of defects n detected along a length of 100 cm exceeds the value L defined in table 2 in terms of the diameter of the pipe.

Table 2

Nominal diameter de	$L = \sum(n.g)$
20	
32	20
62	40
125	

3.2.2.2 Continuous longitudinal marks inside and outside, cavities, marking too deep and indentations caused by marking tool.

Pipes presenting the following defects are classified as defective:

- Continuous longitudinal marks on the inside and outside which are 0.20 mm deep or more (see § 2.2.2.).
- Cavities (see § 2.2.8.).
- Marking too deep (see § 2.3.1.), where the depth is more than 0.20 mm.
- Indentations caused by the marking tool (see § 2.3.2.), where the depth is more than 0.20 mm.

4. ACCEPTANCE CRITERIA FOR BATCHES

4.1. CRITICAL DEFECTS

When a pipe presents one of the defects described in section 3.1., the batch is rejected.

² A defect is considered to be isolated if the gap between the closest edges of two defects is greater than the largest dimension of the defects. Otherwise, it is a single case defect.

Note : Porosity

Rejection is confirmed if the water or volatile contents measured exceed the criteria laid down in the technical specification.

4.2 OTHER DEFECTS

The following rules apply to the sampling test³.

When examining the pipes comprising the sample batch, let n_1 be the number of defective pipes or rolls

if $n_1=0$ the batch is acceptable;

if $1 \leq n_1 < 3$ the batch is acceptable, but the defective pipes or rolls are eliminated; if

$n_1 \geq 3$ a second sample is taken from the batch presented following the procedures described previously, and the defective pipes or rolls are eliminated.

³Sampling: The sample comprises the pipes contained in a whole number of packaging units (crates or rolls) corresponding to 10% in excess of the total length of pipes presented. Examination of the appearance covers the surfaces of the internal and external walls. In the case of pipes rolled on a drum, the appearance is checked for each drum on the sections of pipes in the last layer of rolled coils, as well as those accessible from the side.

When examining the pipes comprising the second sampling, let n_2 be the number of defective pipes or rolls

if $n_2 = 0$ the batch is acceptable;

if $1 \leq n_2 < 3$ the defective pipes or rolls are eliminated;

if $n_2 \geq 3$ the batch is rejected. It may be sorted and, if necessary, the balance of the sorting operation may be presented again for testing.

**POLYETHYLENE COMPOUNDS FOR MANUFACTURE OF PIPES FOR
UNDERGROUND NETWORKS FOR NATURAL GAS DISTRIBUTION ACCEPTANCE
PROCEDURE**

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1 SUBJECT

This specification describes the procedure to be followed for acceptance of a polyethylene (PE) compound for manufacture of natural gas underground distribution systems.

This specification also gives the minimum requirements which have to be met by PE compounds for manufacture of pipes, fillings and valves and for the construction of underground distribution systems for natural gas.

The compounds that meet this specification must at the minimum be PE 100. The color shall be orange in accordance with the local requirements.

2. REFERENCES: STANDARDS AND SPECIFICATIONS

This section contains the list of standards and specifications referred to in this specification.

EN 728: 1997 Plastics piping and ducting systems - Polyolefin pipes and fillings - Determination of oxidation induction time.

prEN 1555-1 Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 1: General

prEN 1555-7 Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 7: Assessment of conformity.

prEN 12099 Plastics piping systems - Polyethylene piping materials and components - Determination of volatile content.

prEN 12118 Plastics piping systems - Determination of moisture content in plastics by conformity.

EN ISO 12162: 1995 Thermoplastics materials for pipes and fittings for pressure applications - Classification and designation - Overall service (design) coefficient.

- EN ISO 13478: 1997 Thermoplastics pipes for the conveyance of fluids - Determination of resistance to rapid crack propagation (RCP) - Full-scale test (FST).
- EN ISO 13479: 1997 Thermoplastics pipes for the conveyance of fluids
- Determination of resistance to crack propagation (RCP) - Test method for slow crack growth on notched pipes (notch test).
- EN 45001: 1990 General criteria for the operation of testing laboratories.
- ISO 1133: 1997 Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics.
- ISO 6964: 1996 Polyolefin pipes and fittings - Determination of carbon black content by calcination and pyrolysis Test method and basic specification.
- ISO/DIS 9080 Plastics piping and ducting systems-Determination of the long-term hydrostatic strength of thermoplastics materials in pipe from by extrapolation.
- ISO 11420: 1996 Method for the assessment of the degree of carbon black dispersion in polyolefin pipes, fittings and compounds.
- ISO 13477: 1997 Thermoplastics pipes for the conveyance of fluids
- Determination of resistance to rapid crack propagation (RCP) - Small-scale-steady- state test (S4 test).
- IS 14885 Polyethylene Pipes for the Supply of Gaseous Fuels-Specification
- 11-0257-02-07-02-001 to 11-0257-02-07-02-003
Polyethylene pipes for underground networks for natural gas distribution
- 11-0257-02-07-02-004 PE Accessories for underground networks for natural gas distribution

3. DEFINITIONS AND SYMBOLS

3.1. LOWER CONFIDENCE LIMIT (LCL)

A quantity with the dimensions of stress, in megapascal, which can be considered as a property of the material under consideration and represents the 97.5% lower confidence limit of the predicted long-term hydrostatic strength at a temperature of 20 degree C for 50 years with internal water pressure.

3.2. MINIMUM REQUIRED STRENGTH (MRS 10)

Standardised class of compounds for which the LCL is equal to 10.

3.3. PE 100

Standard designation for PE compounds in class MRS 10.

For such PE compounds, the long-term hydrostatic strength — calculated and classified according to the standardised method (ISO 9080 and ISO 12162) for a temperature of 20°C, a period of 50 years and a reliability of 97.5 % — must be at least 10 MPa.

3.4. BATCH OF COMPOUND

By batch of compound is meant a homogeneous quantity of PE compound of the same origin and of a particular brand.

The batch must be registered under a single identification number (batch number) which leaves no doubt as to the origin, identity and date of manufacture of the compound.

3.5. BATCH OF PIPES

By batch of pipes is meant a homogenous lot of pipes with identical dimensions, made in a continuous process by the same extrusion machine and from the same batch of compound.

4 GENERAL SPECIFICATIONS

The PE compounds that are acceptable according to the requirements of this specification must conform to the requirements for PE 100 described in prEN1555-1.

If the proposed compound is destined for manufacture of pipes, then the acceptance procedure is carried out as described in this specification.

If the proposed compound is destined for manufacture of fittings, then the first stage (section 6) of this acceptance procedure is carried out, after which type tests are carried out on the fittings manufactured from the material concerned. An independent laboratory appointed by Owner/ owner representative will then evaluate whether conformity with the characteristics mentioned in the technical file has been proved, on the basis of the provisions of prEN 1555-7 and CUGL specification 11-0257-02-07-02-004.

5. SUMMARY OF THE PROCEDURE

5.1. GENERAL

The acceptance procedure for PE compounds comprises two stages, namely the evaluation of the technical file and the confirmation tests. The different steps are carried out in the order described below.

The tests which form part of the technical file are carried out on pipes or samples supplied by the compounds manufacturer. In principle, all tests mentioned in the technical file are carried out on pipes from the same batch.

The tests mentioned in chapter 7 are carried out on pipes manufactured by a pipe manufacturer chosen by Owner/ Owner Representative .

The tests mentioned in chapter 6.1 (table 1), 6.2 and 7 are carried out in a laboratory appointed by Owner/ Owner Representative.

5.2. APPLICATION FOR APPROVAL

A manufacturer that wishes to have a certain PE compound classified for the manufacture of PE gas components must submit a written application to Owner.

This application must be accompanied by a clear description of the compound concerned, including the technical characteristics.

All correspondence must be in English.

6. TECHNICAL FILE

6.1. EVALUATION

If the application is taken into consideration by Owner/ Owner Representative, the compound manufacturer must submit a technical file to a laboratory appointed by Owner/ Owner Representative.

This technical file must include the following information:

- name and class of the PE compound;
- technical characteristics of the compound, with reference to the standard;
- a dossier with test results, from an independent laboratory, showing that the proposed compound meets the requirements of prEN 1555-1 for a PE 100 compound. The dossier must also state which tests have been carried out on the same batch of pipes or test samples, including the identification of their origin.

The laboratory chosen by Owner/ Owner Representative will also evaluate the conformity of this dossier, taking the following rules into account:

a) If the tests mentioned in the technical file have been carried out by a laboratory accredited according to EN 45001, and if the tests have been carried out on the same batch of pipes for the required diameter and wall thickness, then the evaluation will be limited to an examination of the dossier in accordance with the provisions of prEN 1555-1 and the quantity of test samples laid down in 1555-7;

b) If the tests mentioned in the technical file have been carried out by a laboratory that is not accredited according to EN 45001 and/or on different batches of pipes for the same diameters/wall thickness, then the evaluation will be done on the basis of further tests in order to confirm the characteristics mentioned in the technical file.

c) The characteristics for rapid crack propagation (RCP) and slow crack propagation (SCG), as mentioned in the technical file, must comply with the requirements of the standard. Furthermore, the requirements of table 1 must be met:

Characteristic	Requirement	Standard
PcS4	DN 250- SDR 11 0°C - > 3,5 bar	ISO 13477
PcFS	DN 250- SDR 11 0°C-> 15 bar	EN ISO 13478
SCG	DN250-SDR11 80°C-σ _{4,6} ->500h	ENISO13479

The tests mentioned in table I must be carried out by an independent laboratory appointed by Owner/ Owner Representative. The three series of tests must be carried out on the same batch of pipes. If it emerges from the evaluation of the technical file that conformity with prEN 1555-1 is guaranteed, then the next stage of the procedure can commence, as described in section 7.

6.2. ADDITIONAL TESTS

6.2.1. General

If from the evaluation L emerges that the dossier submitted is incomplete or does not offer the necessary guarantees of conformity with the standard, then additional tests will be carried out by the laboratory appointed by Owner, at the cost of the compound manufacturer.

The same procedure will be followed if the technical file has been drawn up by a laboratory that is not accredited and/or if several batches of pipes have been used for each diameter/wall thickness in carrying out the tests.

6.2.2. Delivery of the pipes

The required batch of pipes must be delivered by the compound manufacturer, the pipes having been produced by a pipe manufacturer who at that moment is a Owner/ owner representative supplier.

The number of pipes must be based on the numbers and frequencies mentioned in prEN 1555-7. If the technical file is based on tests carried out by a non-accredited laboratory and/or carried out on several batches of pipes per diameter/wall thickness, then the tests will repeated on at least half of the required test samples; if the number thus calculated is not a whole number, the number of test samples taken will be equal to the next whole number.

6.2.3. Test results

If from the additional tests it appears that conformity with prEN 1555-1 is guaranteed, then the next phase of the procedure can commence, as described in section 7.

If despite the additional tests no unambiguous decision can be taken regarding the conformity of the compound, then further additional tests will be carried out, until the number of test samples is at maximum equal to the number specified in the standard concerned. For this purpose, the manufacturer must keep sufficient pipes of the same batch in reserve.

If the evaluation is still not positive after the maximum number of samples has been tested, then the compound will be considered as not accepted.

7 **CONFIRMATION TESTS**

The second stage of the acceptance covers the industrial production of pipes, the verification of the characteristics, the laying of the pipes and the fusion to existing PE systems.

This second stage of the acceptance is carried out by Owner/ owner representative.

Before this stage can commence, the manufacturer must provide Owner/ owner representative with a technical data sheet (see appendix 1) showing the limit values for the characteristics of the compound concerned.

For the purpose of carrying out this part of the procedure, Owner/ owner representative will order a batch of pipes from one of its pipe manufacturers. After verification of the characteristics in the factory and confirmation by an independent laboratory, the pipes will be installed in the Owner/ owner representative gas distribution network, taking into account the following aspects:

- Any problems with delivery and with extrusion of the compound will be noted.
- The limits of the characteristics mentioned in the technical data sheet.
- For characteristics not included in the technical data sheet, the measured value may deviate by max.

30% from the average values mentioned in the technical file, to the extent that these are relevant and

not in conflict with the requirements of the standard.

- Any problems with laying or welding or connecting the pipes; these will be noted.

If from the test results it appears that the characteristics of the compound and/or pipes do not comply with the requirements, or if anomalies are found in laying and/or welding of the pipes, then the acceptance procedure will be provisionally suspended. The problems found will be analysed in consultation with the compound manufacturer, and an attempt will be made to find solutions which are acceptable to both parties.

If this turns out to be impossible, then the compound will be considered as not accepted.

In such a case, the costs of the second stage could be charged to the compound manufacturer.

If the second stage of the procedure is successfully completed, then the compound is accepted and will be included in the list of “Approved PE Compounds”. This list is published in the CUGL specifications for PE pipes (11-0257-02-07-02-001 to 003) and PE fittings (11-0257-02-07-02-005). The materials will be included when the list is next published (around once every two year).

8. FOLLOW-UP

8.1. TECHNICAL DATA SHEET

The manufacturer must supply Owner/ owner representative with a technical data sheet, as described in Appendix 1, with permission for Owner/ owner representative to publish this technical data sheet in the specifications for PE pipes and fittings, for as long as the compound is included in the list of approved compounds.

The data entered on this data sheet apply as limit values for the compound concerned.

Whenever one or more characteristics of a batch of compounds falls outside these limits, then the batch will be automatically refused for production of components destined for our gas network.

8.2. CONTINUITY OF THE COMPOUND

No alterations may be made to the compound without prior permission from Owner/ owner representative.

As mentioned in 8.1, the limits mentioned in the technical data sheet must be respected. Furthermore, in the case of characteristics not included in the technical data sheet, the measured values may not deviate by more than 30% from the average value mentioned in the technical file, to the extent that these are relevant and not in conflict with the requirements of the standard.

Each change that affects the final characteristics of the compound can result in additional tests being carried out by the compound manufacturer in accordance with the provisions of prEN 1555-7 appendix A. The procedures for the test shall correspond to those described in section 6.1 of this specification.

APPENDIX 1 Technical Data Sheet

Characteristics of (name of PE compound) as per prEN 1555-1

Characteristics	Standard	Specification
MRS	EN ISO 12162	MPa
Density min. max.	Method D of ISO 1183	kg/m ³ kg/m ³
MFR190/5 mm. max.	ISO 1133	g/10 min g/10 min
Volatile content max.	prEN 12099	mg/kg
Water content max.	prEN 12118	mg/kg
Carbon black content Min. Max.	ISO 6964	% - %

Carbon black dispersion max	ISO 11420	<=Grade
OIT at 210°C min.	EN728	...min

Company

Person responsible

Position

Signature

SOR (SCHEDULE OF RATES)

SECTION-VII